Enterprise Information Management (EIM) Concept of Operations (CONOPS) Concept Briefing

USAFE/A6T
7 Mar 05

"Break out of industrial age business processes and embrace information age thinking."
– AF Transformation Flight Plan, Nov 03

CONOPS Purpose

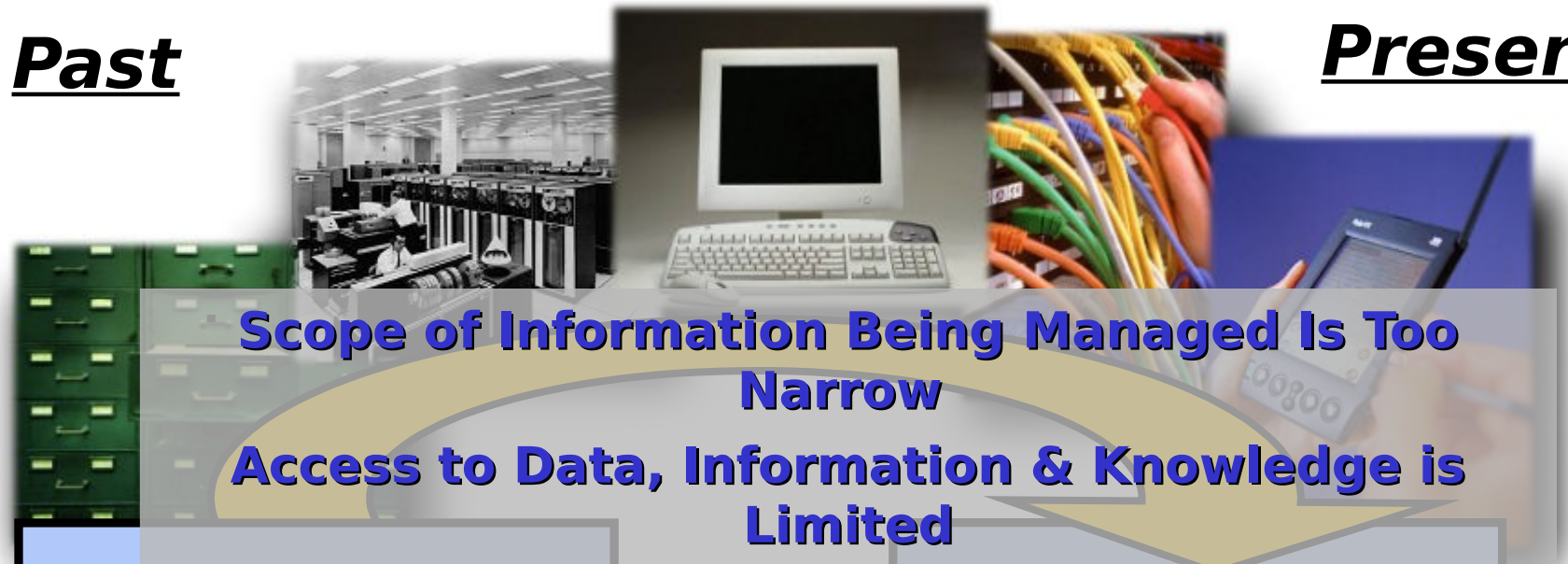
- **Develop Enterprise Information Management CONOPS which will:**
  - **Redefine “information management”**
  - **Harnesses transformational capabilities of IT**
  - **Focuses on AF-wide enterprise operations**

- **Concept Briefing**
  - **Briefed to IL, XI, CIO & CIPT SWG - Vector check of concepts**
- **CONOPS Document**
  - **Used AOC, C2 Net & NCES CONOPS as templates**
  - **ILC to distribute for coordination**

Today's Challenge: IM "Evolution"

Past

Present



Scope of Information Being Managed Is Too Narrow

Access to Data, Information & Knowledge is Limited

Current Approach Merely Automates Existing Processes

- Records Management
- Forms/Publications
- Document Management

- Records Management
- Forms/Publications
- Document Management
- Workflow Management
- Collaborative Tools
- Knowledge Management

Enterprise Information Management Vision

- **Develop an AF enterprise approach to managing information that will:**
  - **Transform the use and management of information into warfighting enablers across the continuum of AF, joint, & coalition missions**
  - **Shift the focus from operating applications and systems to performing tasks and functions based on new process engineering, control and management disciplines**
  - **Create a cultural change …. in how the AF will operate**

"The Air Force Information Vision: Enabled mission capabilities through seamlessly integrated access to the right information anytime, anywhere"

– AF Info Strategy, Aug 02

A New Approach

- **Institutional shift that:**
  - **manages data as *knowledge* and *shares* it**
  - **moves from *enclave* to *enterprise* use, exchange, & collaboration**
  - **Shifts from *application-based* to *tasks-based* processes**
  - **Is a *fundamental process* change vice automating existing processes**
- **Flexible, agile, and scaleable environment that adapts to change**
  - **Functions in static, predictable, & formalized environment as well as complex, unpredictable & unformalized environment**
  - **Example: EIM will function equally well in an orderly room or a CAOC)**
- **Apply technology to locate, correlate, and fuse disparate data into predictive knowledge…across the enterprise**
- **Provide universal form, fit, and function**
- **Uses an integrated, centrally managed IT foundation**

Scope of "Information" – Open the Aperture

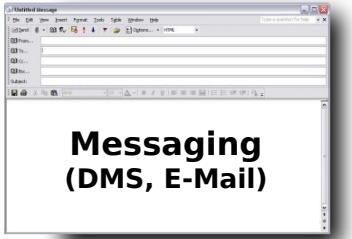
Enterprise Information

Paper-based Records

Audio & Video
(Inc. Streaming)

Space-based ISR

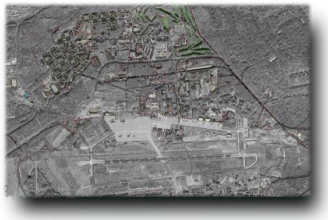
Locally Stored Data
(Documents & Files)



Messaging
(DMS, E-Mail)

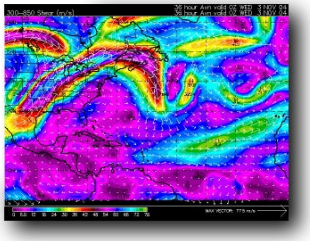
Expeditionary Information
(Munitions, Target, BDA)

Airborne ISR



GEO Spatial Data

Weather Info



Enterprise Data Storage
Transactions & Databases

Ops & Ops Support

JWICS JOPES GCSS ETC…

"Bring Your Courage"

Sharing Institutional Knowledge

Home Base Systems

Personnel

Deployment Readiness

UTC	% Ready
23536	100
23682	95
23808	100
23411	70
23671	100

Deployment Training

Personnel	% Trnd
Doe, Donny	100
Little, Sue	95
Big, Tom	100
Snider, Jeff	70
Chiffy, John	100

Logistics

Munitions Inventory

Type	Stock
AGM-65	100
MK-20	125
AIM-9	300
AIM-120C	225
Chaff	5M

Ammo Inventory

Type	Stock
M-9	300K
M-16	1.5M
M-60	1.25M
20mm	5M
GAU-8/A	2M

Supply

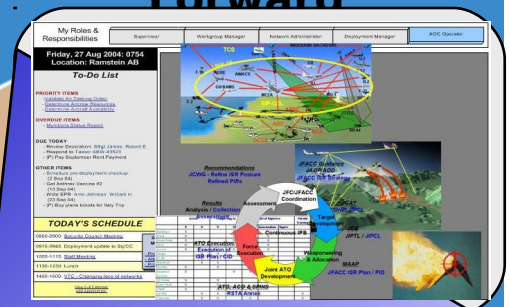
Delivery Schedule

Item	Del Date
Lumber	29 Aug
Mesh	5 Sep
Sandbags	7 Sep
Shovels	7 Sep
Hammers	9 Sep

Red Horse Requisition

Item	On-Hand
Lumber	No
Cement	Yes
Nails	Yes
Mesh	No
Glue	Yes

Forward



Operations Require Access to and Fused Display of Tailored Disparate Data

Regional Systems

DEPOT

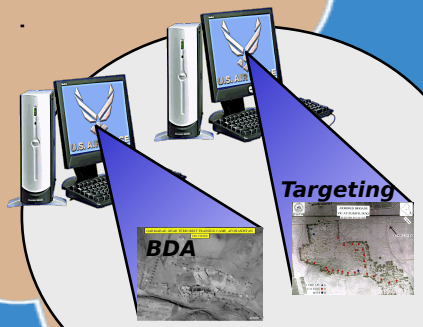
Parts Delivery Schedule

Part	Del Date
Breaks	5 Sep
Hy-Ln	7 Sep
Cmprsr	7 Sep
Fet Valve	9 Sep
#5 Valve	9 Sep

PMEL Schedule

Type	Duration
APG	3 Days
3 Nickle	5 Days
Lift	2 Wks
Radio	2 Days
V Mtr	1 Day

JIC



AF is now "drowning in information and starving for knowledge"
-Lt Gen Keys, 2003-OIF

"Bring Your Courage"

Air Force

Functional Community A

Functional Community B

Intra-community Exchange:

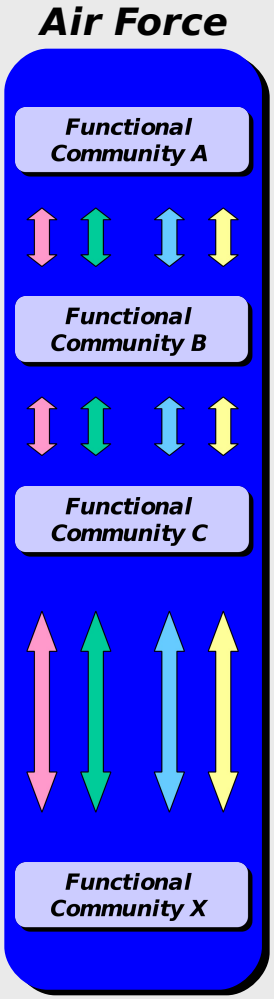
Data Visibility

Information Exchange

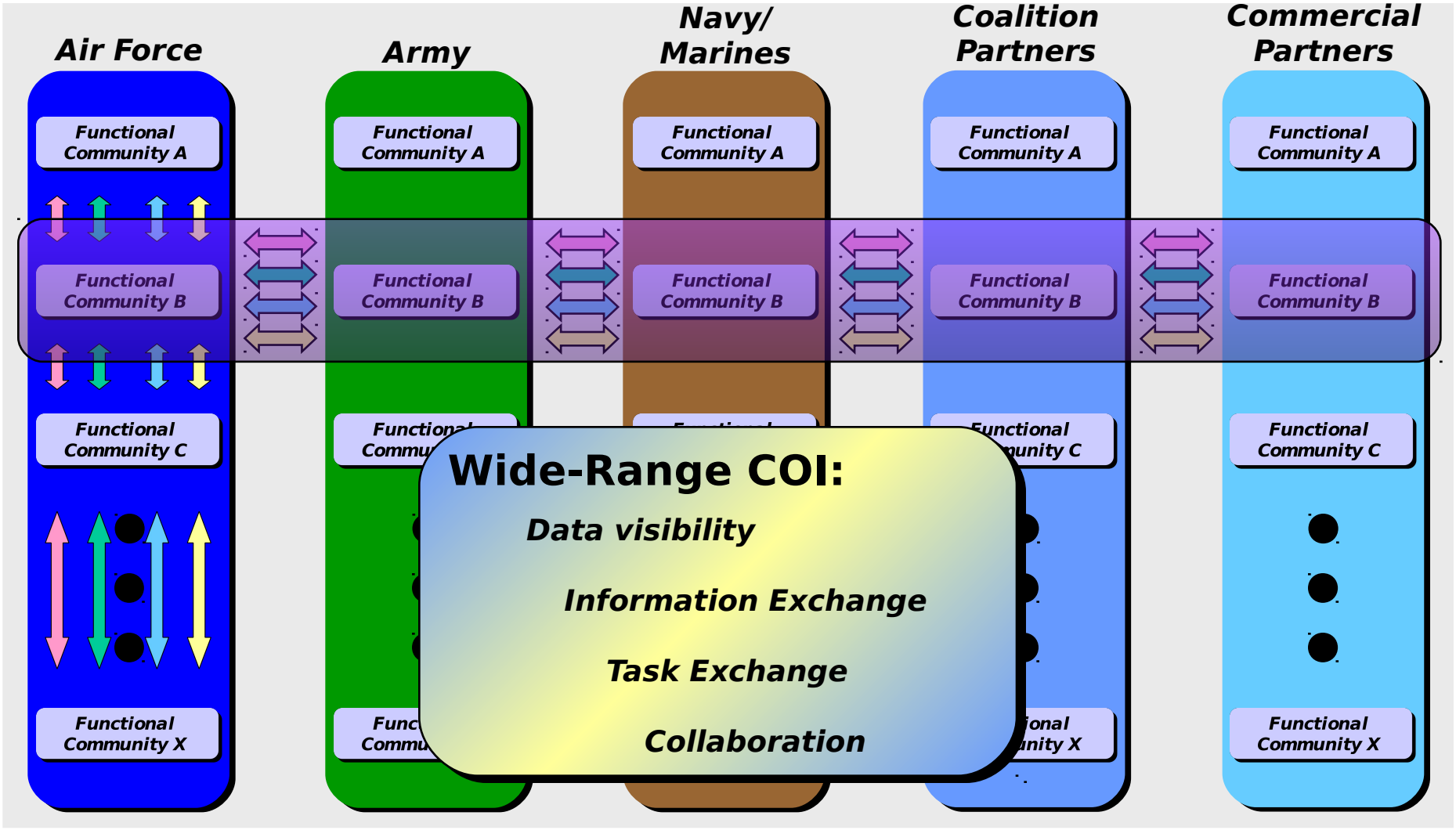
Task Exchange

Collaboration

AF Functional Area Interoperability



Wider Range COIs



Primary Benefits

- Task-Centric Mission Execution
- Data Portability
- Customized Workspace Creation
- Common Toolset and Functionality
- Reduced Training Requirements
- Full-spectrum Collaboration
- Process Engineering & Standardization with Integrated Performance Measurement
- Improved Content and Knowledge Management
- Improved Situational Awareness
- Superior Information Relevance
- Decision superiority
- Increased Virtual Support
- Tightly Coupled Reachback Support for Expeditionary Forces
- Rapid Expeditionary Set-Up
- Force Readiness
- Work force re-engineering
- Greatly Increased Joint and Coalition Interoperability

EIM Functionality

WORKFLOW ENVIRONMENT	INFORMATION CONTROL ENVIRONMENT	INFORMATION INTERFACE ENVIRONMENT
- Process definitions - Task definitions - Workflow management -- Automated product routing -- Task-/To-do list dissemination - Templates of above items - User Profiling -- Roles -- Responsibilities -- Permissions - Data Access Control - Determines flow of: -- Product creation -- Coordination -- Approval -- Validation & verification - Process engineering - Performance Measures	- Information Lifecycle Mgmt - Storage schema -- Taxonomies -- Information Index -- Naming conventions - Maximized data sharing - Data accessibility - Data survivability - Authoritative data source - Interactive/intuitive data tagging - Interactive/intuitive data retrieval - Information Search Engines - Document Management -- Revision control - Records Management	- Universal User Interface (UUI) - Role-based workspace creation - Data creation & modification - Common tools - Situational Knowledge Mgmt (SKM) - Predictive data analysis - Predictive situational picture (PSP) - Interface to job task list - Interface to comm services - Functional Modules behind UUI - Interactive/intuitive data tagging - Decision superiority

Control

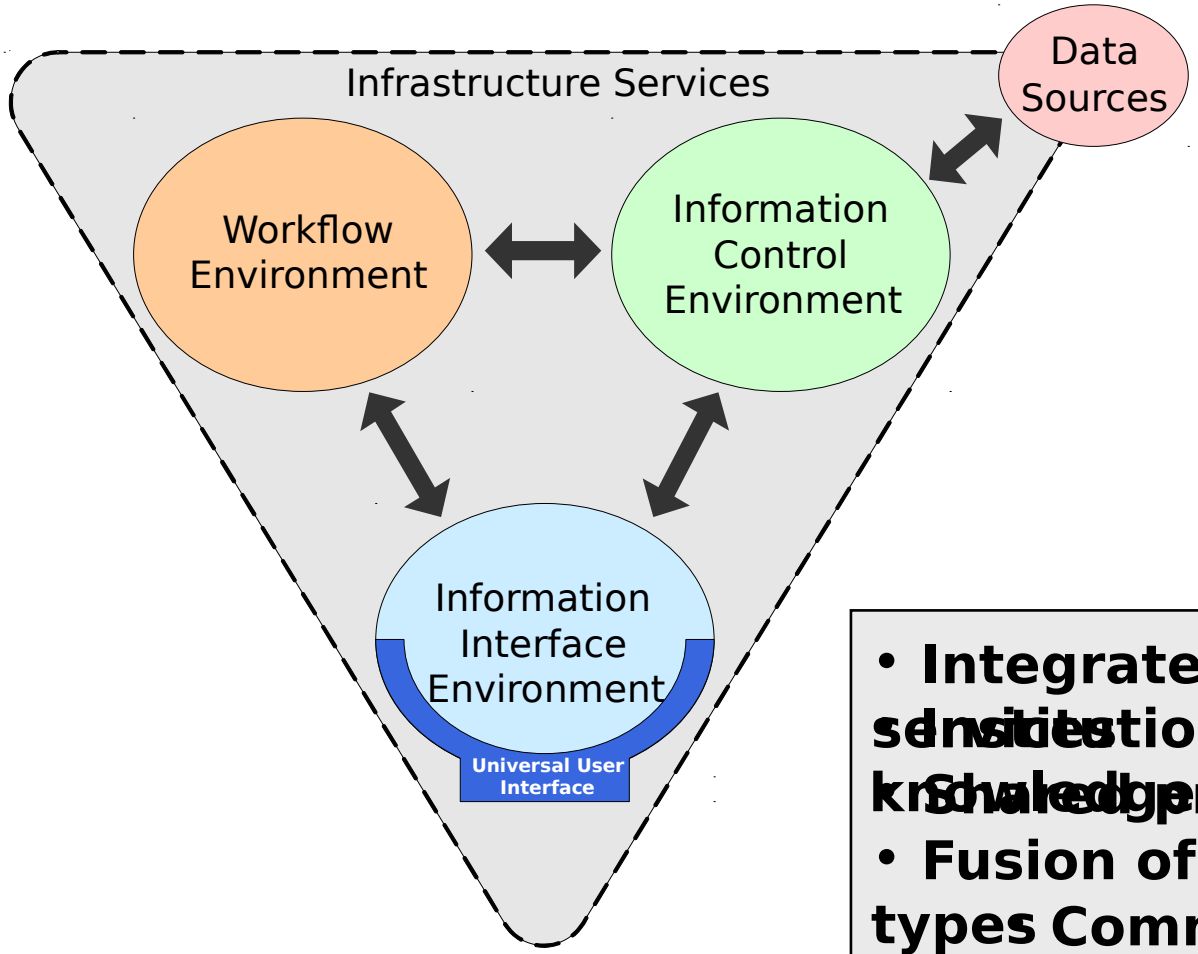
What & Where

User Access

INFRASTRUCTURE SERVICES	- Client, server & network infrastructure - Quality of service management - IA/network security	- Network configuration control & management - Upgrades & patches - Communication & collaborative services

Utilities

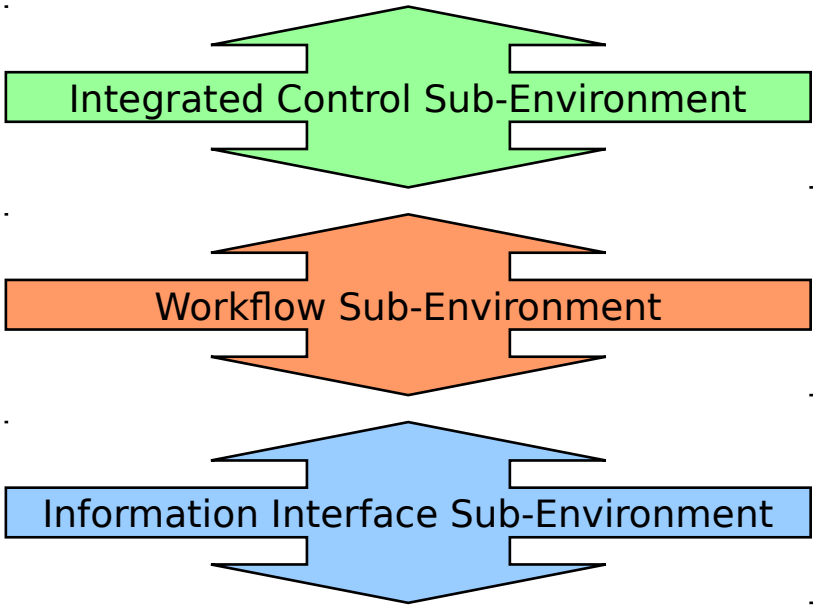
EIM Environment



- **Integrated management & sensitive**
- **Shared processes**
- **Fusion of disparate data types**
- **Enterprise view**

Functional
Common Access & Functionality

System or System of Systems?



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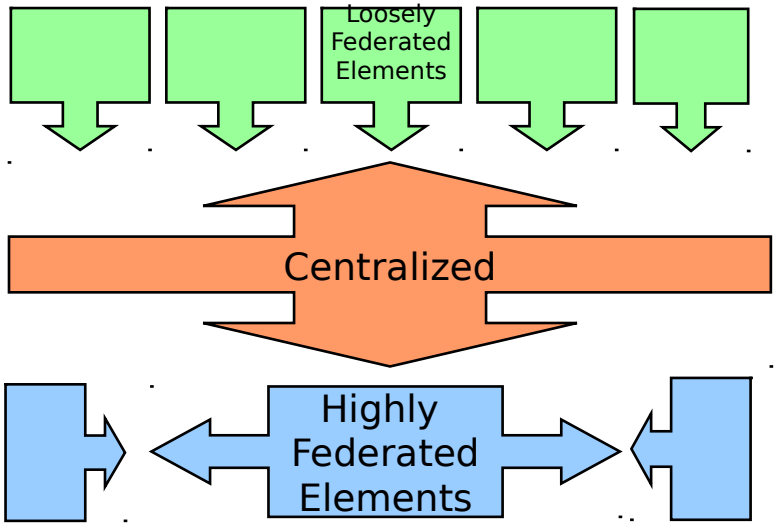


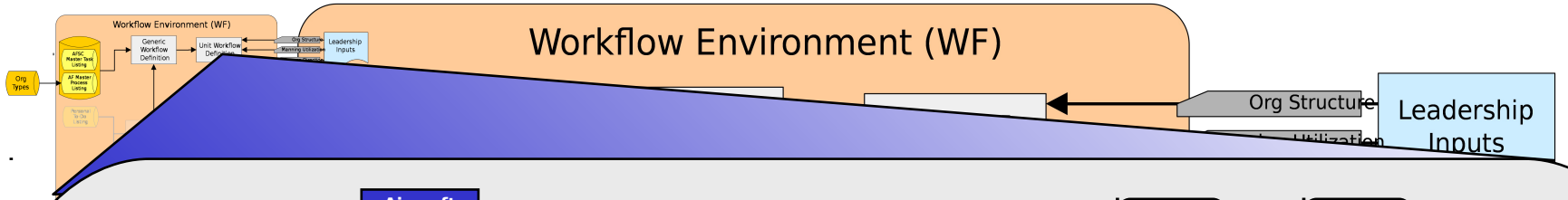
- Implementation TBD
- Important Part: It all works together: “One AF-One Enterprise”

Supporting Vignettes & Examples Developed to Show EIM Concepts

- Workflow set-up from Master Libraries to organizational WF ops
- Portion of ATO generation
  - Communications and Collaboration Tools
- Munitions In Transit Visibility (ITV)
- E-2 Housing Allowance transaction
- Promotion Recommendation Form (PRF)
- EPR Coordination & Approval
- Appointment letter staffing– wing level tasker for all base units

- Wide range of AF missions - Cross functional boundaries

Workflow Environment
Setup/Process Admin



First Sergeant

Aircraft Maintenance Squadron Commander

Secretary

Maintenance Chief

Select closest-fit organizational structure and processes

C-5 AMU OIC

CC's Support Staff NCOIC

Mobility NCOIC

F-16 AMU NCOIC

FA-22 AMU NCOIC

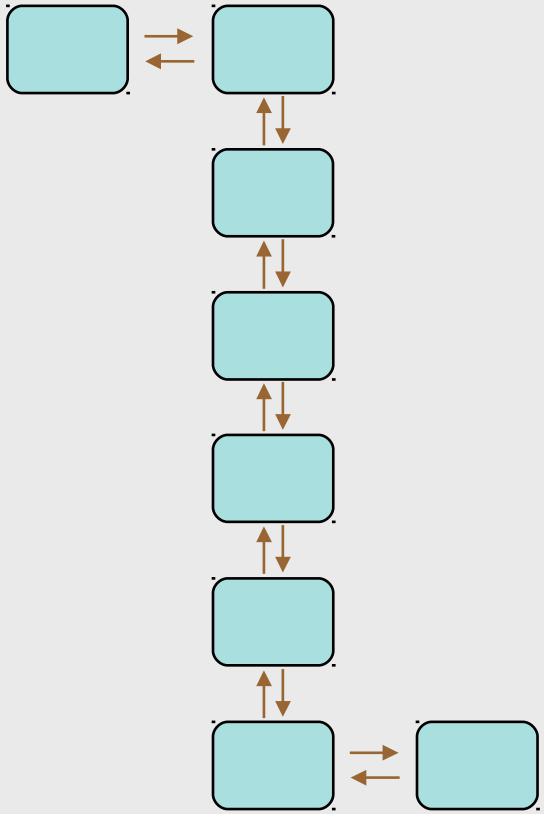
Weapons Section NCOIC

Specialist Section NCOIC

Crew Chief

CC's Support Staff Specialist

Specialist



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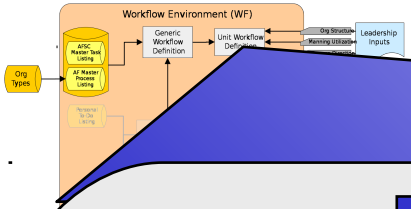
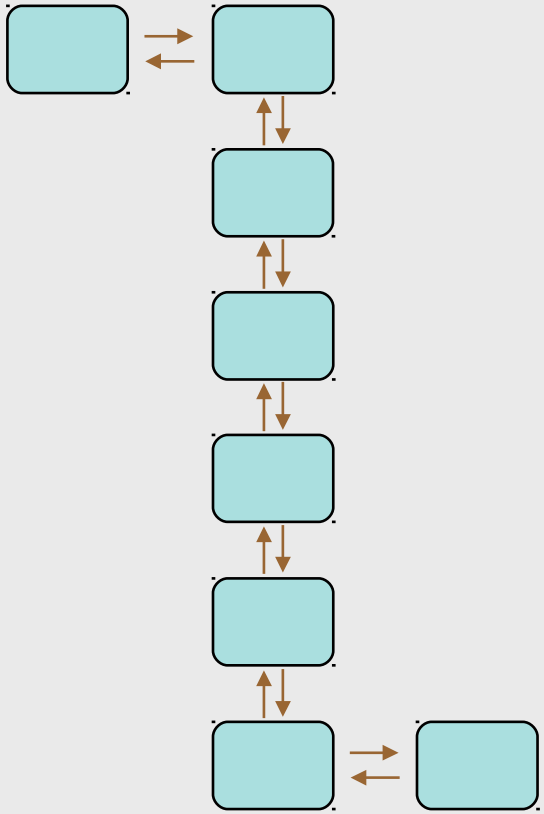
Workflow Environment
Setup/Process Admin



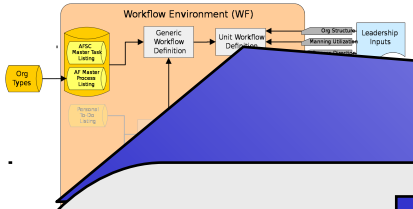
Modify nominal organizational structure to match unit's actual structure

- First Sergeant
- Secretary
- Aircraft Maintenance Squadron Commander
  - Maintenance Chief
    - Executive Officer
      - CC's Support Staff NCOIC
        - CC's Support Staff Specialist
      - Mobility NCOIC
    - F-16 AMU OIC
    - FA-22 AMU OIC
      - C-5 AMU NCOIC
      - FA-22 AMU NCOIC
        - Weapons Section NCOIC
        - Specialist Section NCOIC
          - Weapons Technician
        - Crew Chief
    - C-5 AMU OIC



Completed 2a

Workflow Environment
Setup/Process Admin



Modify nominal processes according to unit leadership direction

Map modified processes to unit structure

First Sergeant

Secretary

Aircraft Maintenance Squadron Commander

Maintenance Chief

Executive Officer

CC's Support Staff NCOIC

Mobility NCOIC

CC's Support Staff Specialist

F-16 AMU OIC

F-16 AMU NCOIC

Specialist Section NCOIC

Specialist

FA-22 AMU OIC

FA-22 AMU NCOIC

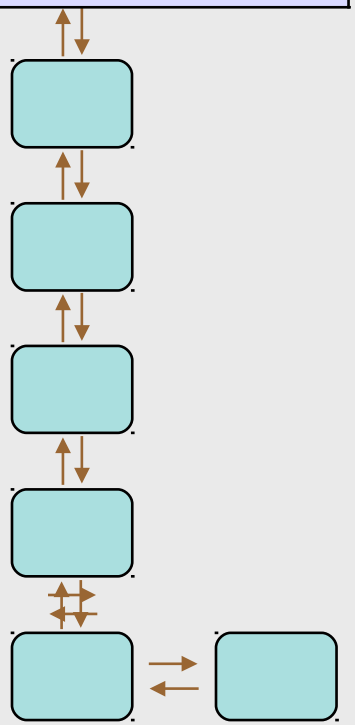
Weapons Section NCOIC

Weapons Technician

C-5 AMU OIC

C-5 AMu NCOIC

Crew Chief



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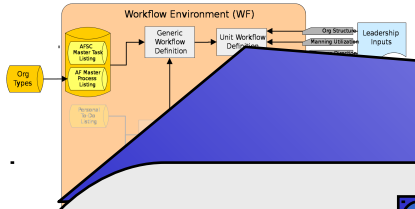
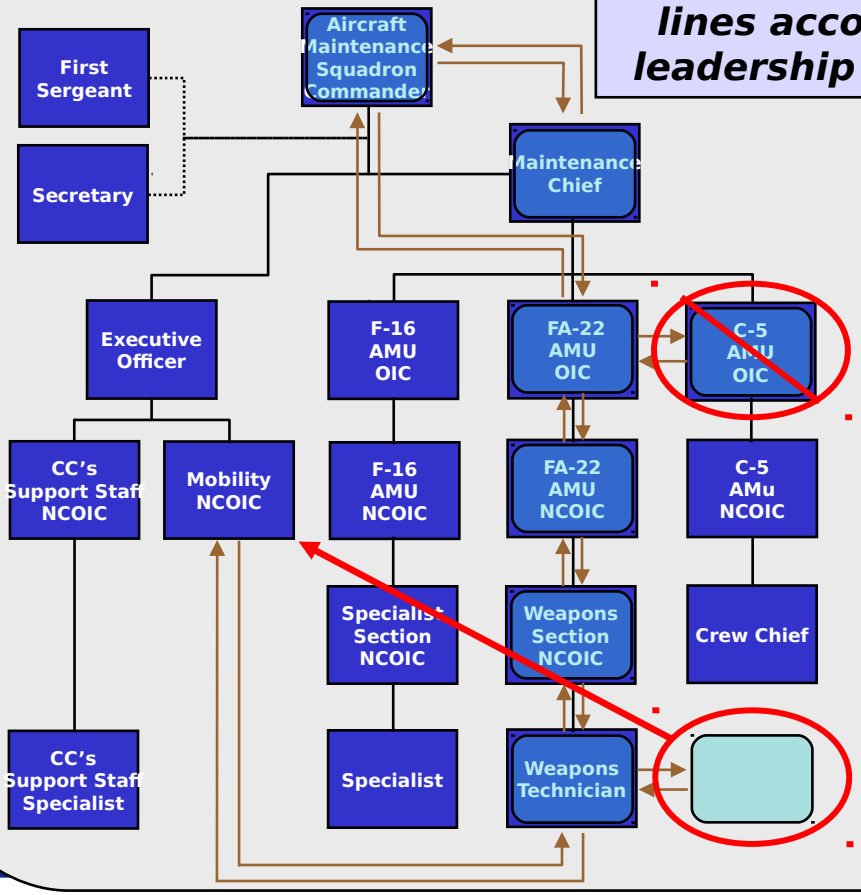
Workflow Environment
Setup/Process Admin

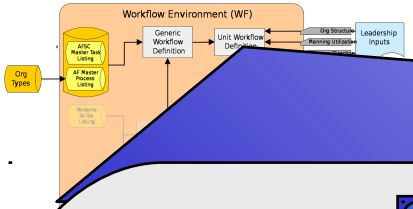


Modify workflow lines according to leadership direction

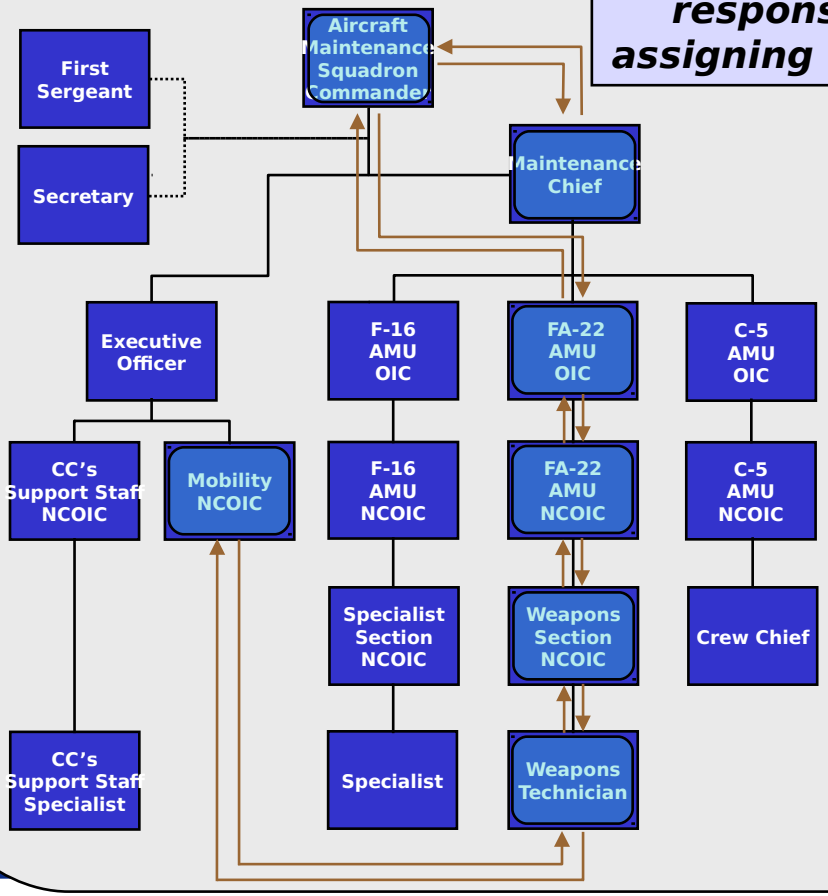


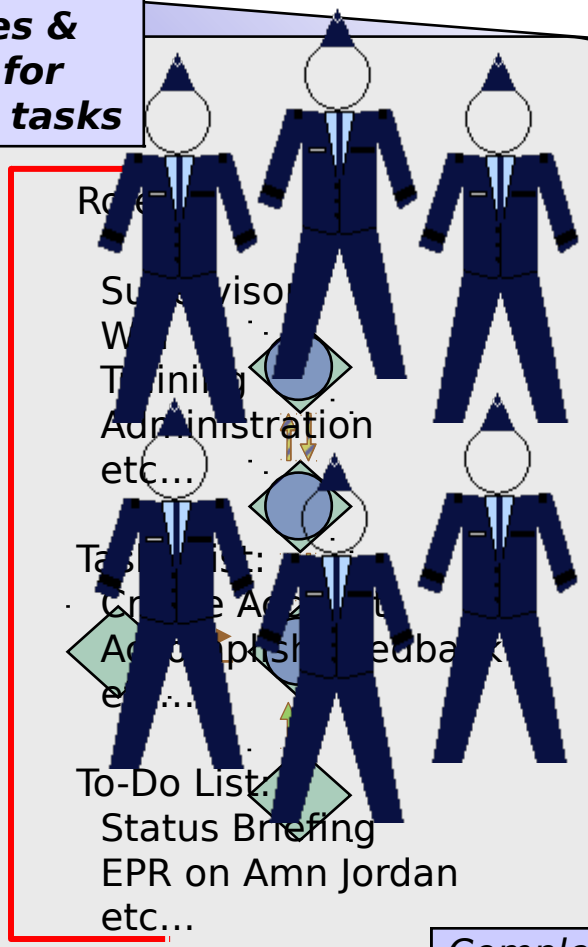
Completed 4a

Workflow Environment
Setup/Process Admin



Workflow now contains user profiles (roles & responsibilities) for assigning workflow tasks

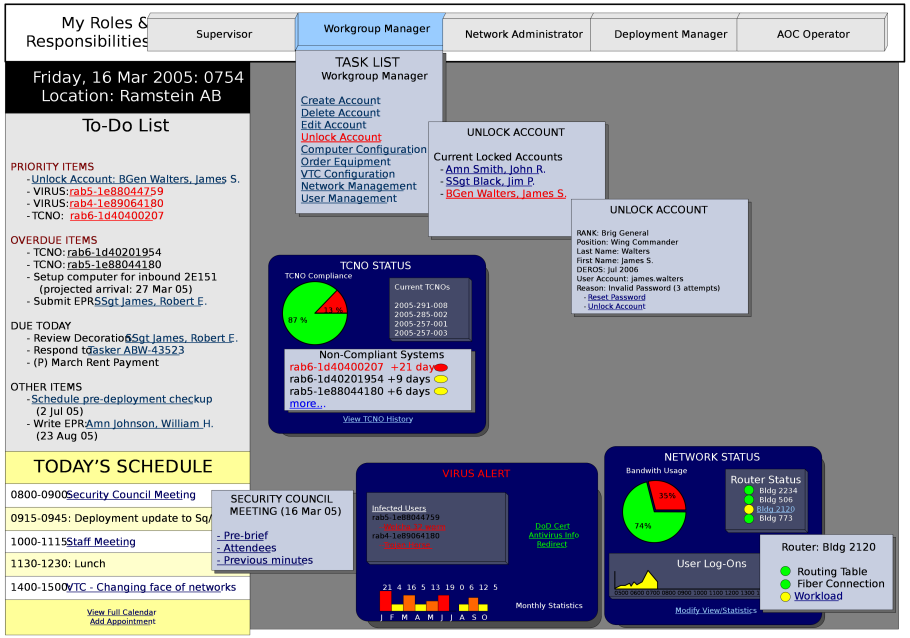




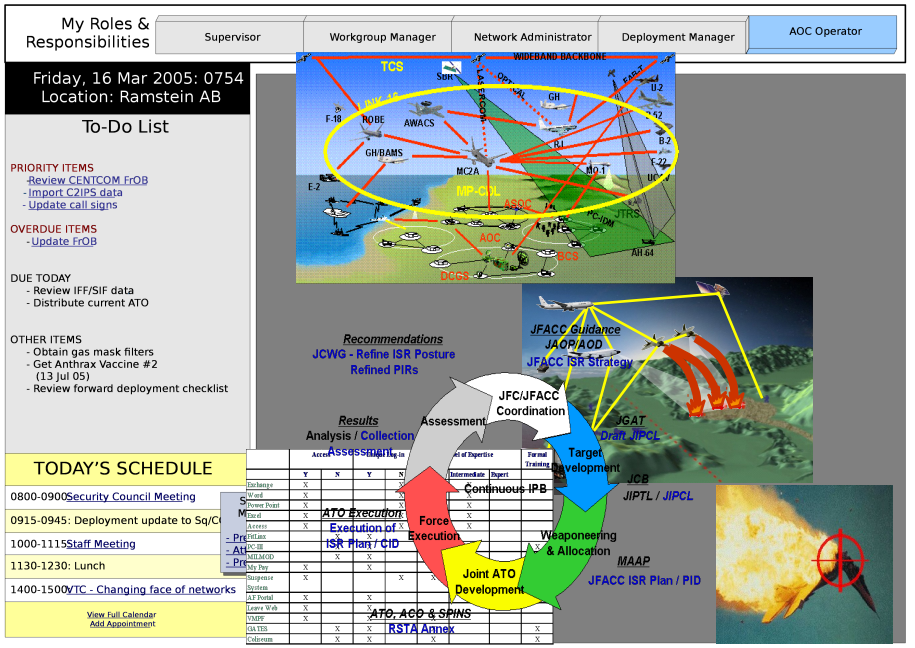
Completed 5c

"Bring Your Courage"

Role Based Workspace



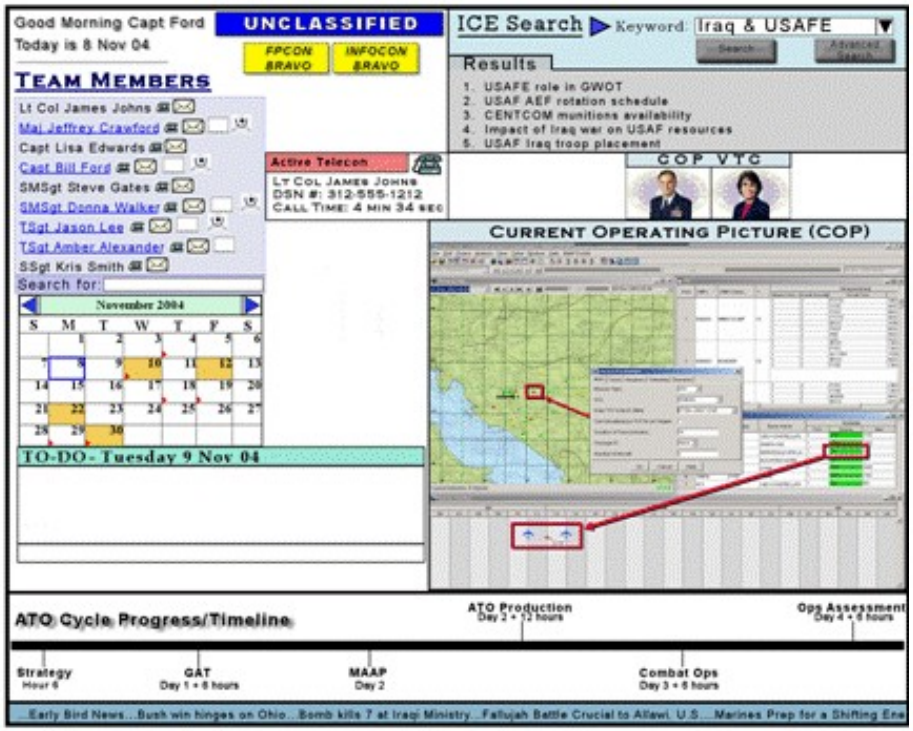
Primary Duty as Work Group Manager

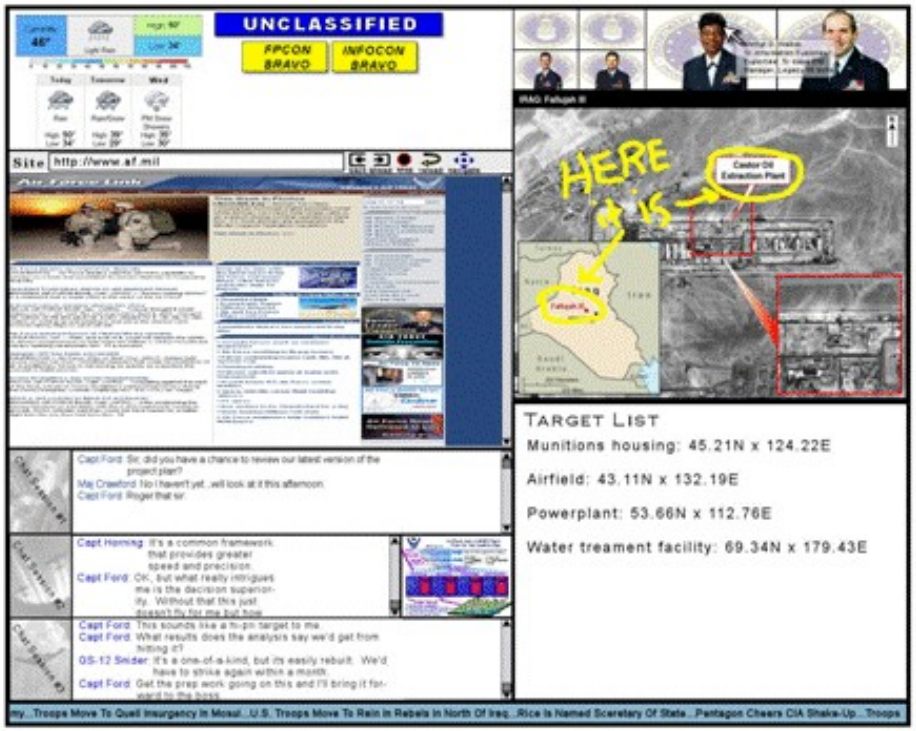


Same Airman, Detailed to AOC

"Bring Your Courage"

Notional Collaborative Tools

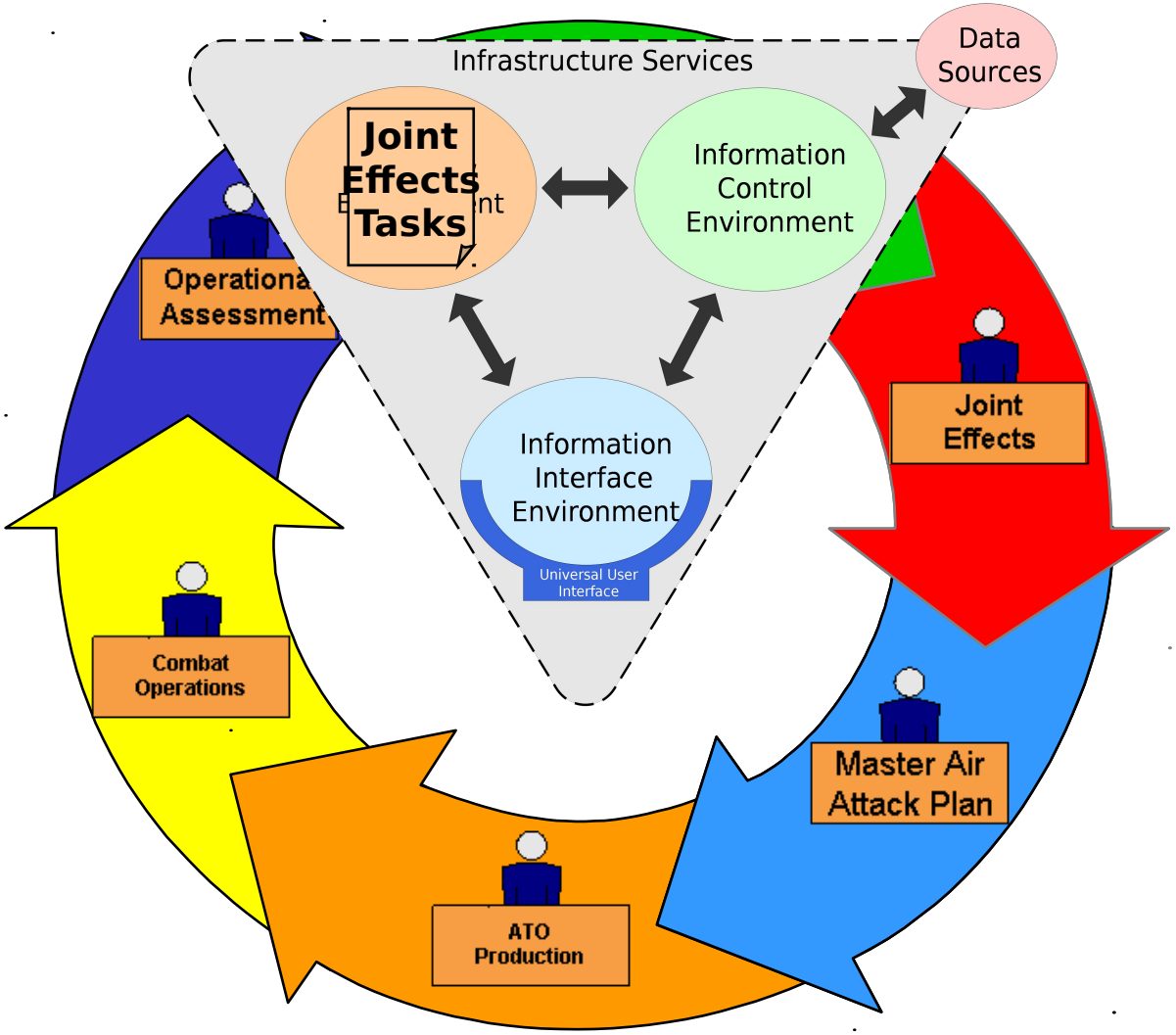


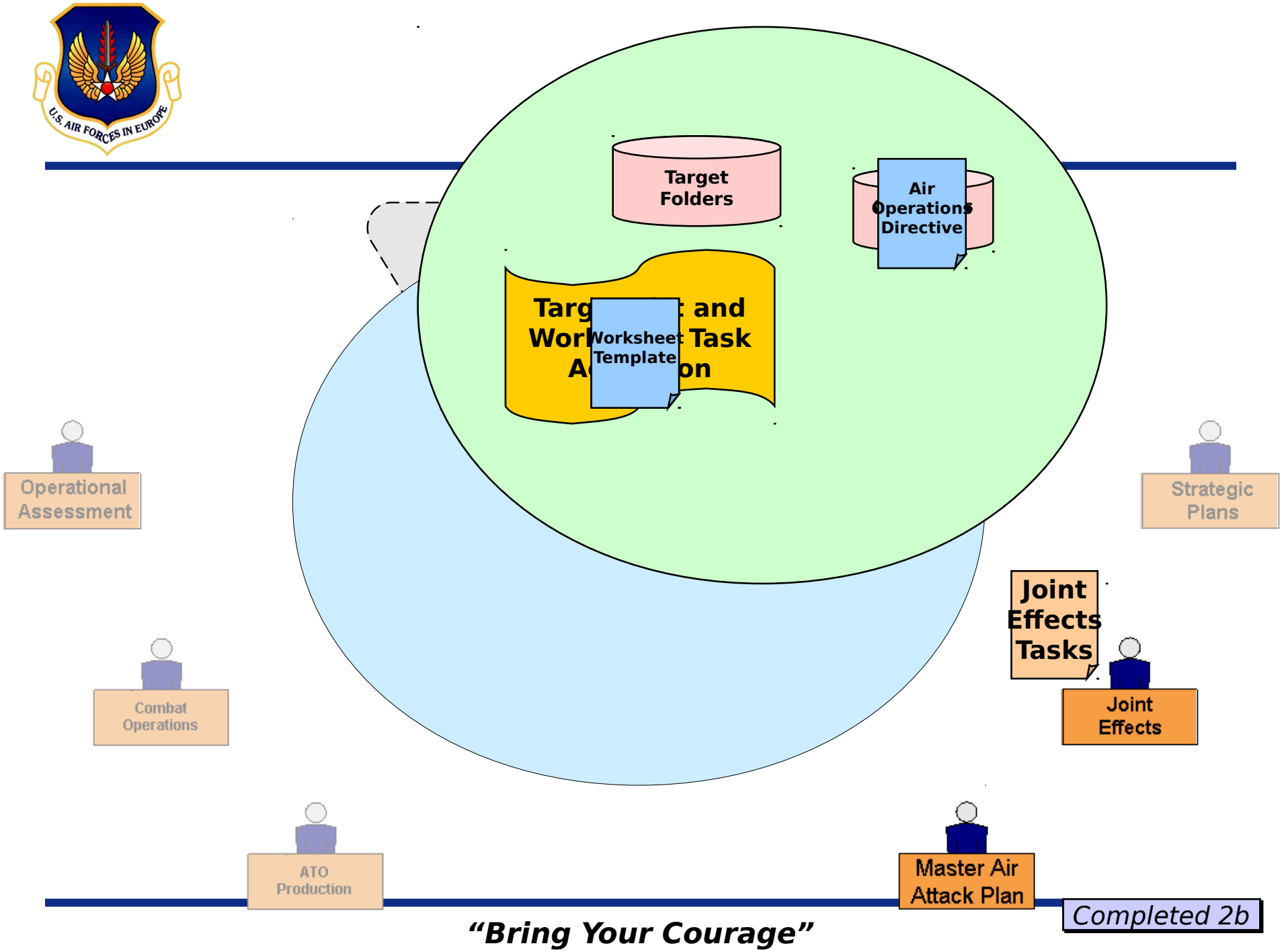


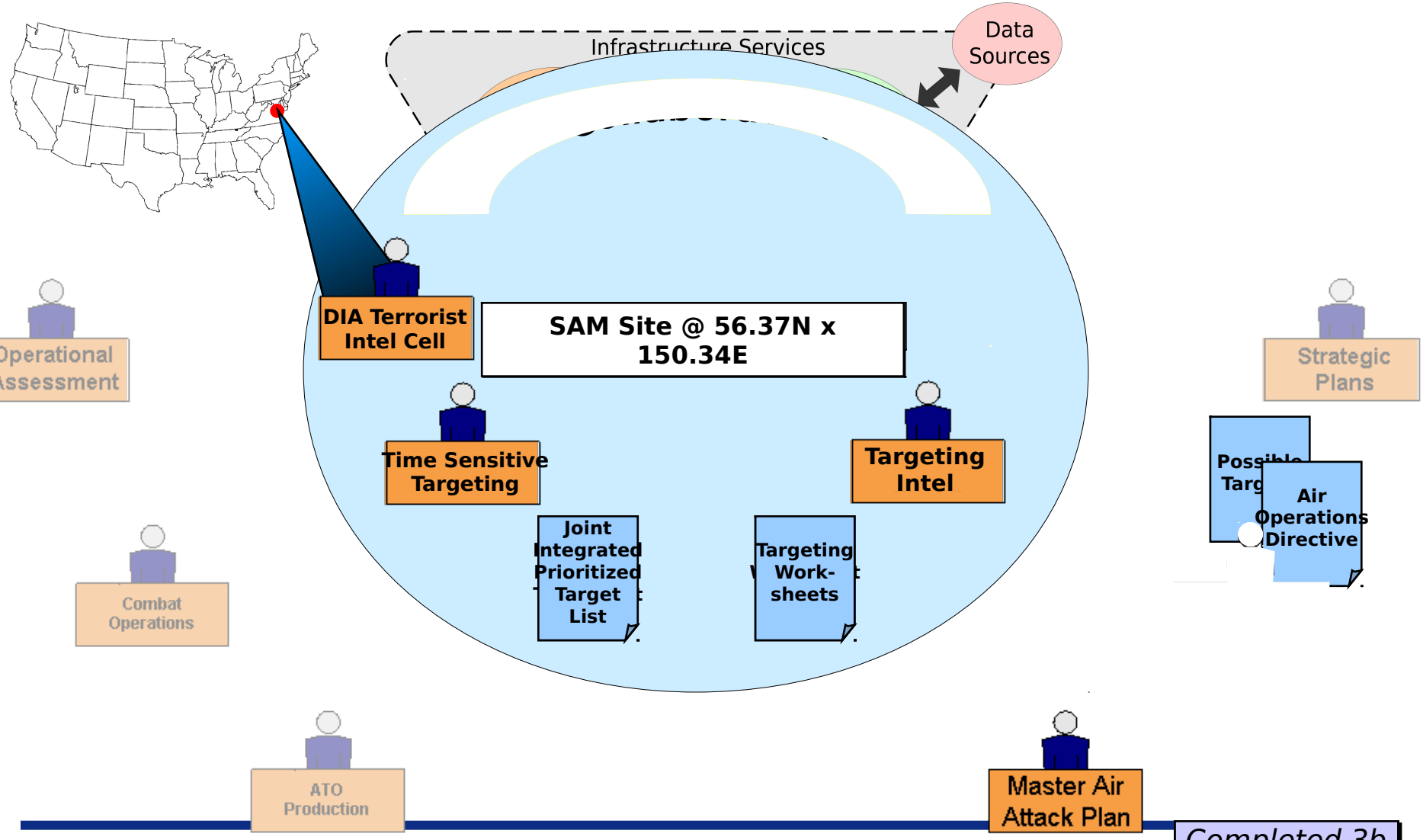
Integral to Infrastructure Services & Workflow Processes

"Bring Your Courage"

Portion of ATO Production EIM Vignette

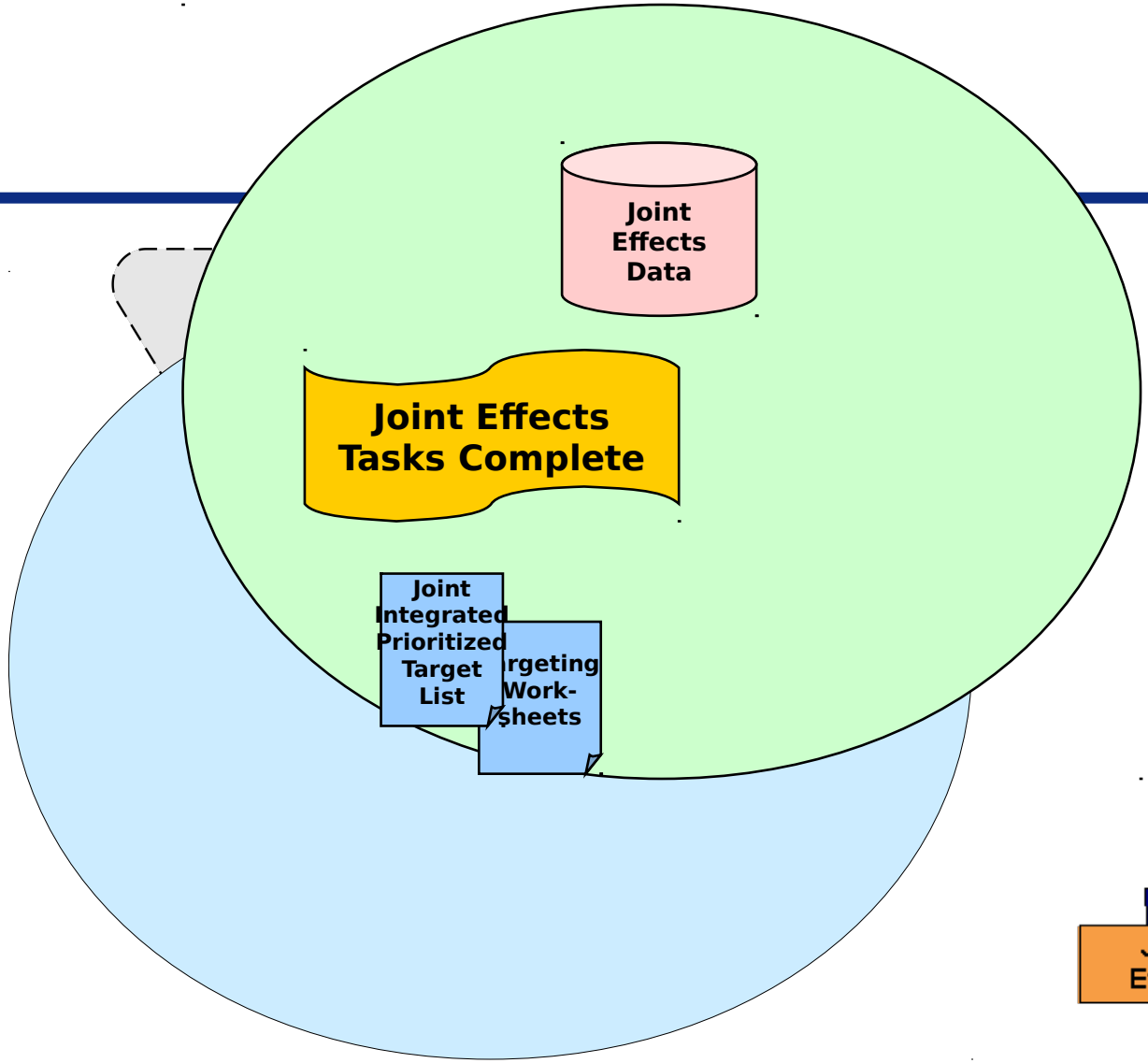



Target Folders
Air Operations Directive
Worksheet Template
Operational Assessment
Strategic Plans
Joint Effects Tasks
Combat Operations
Joint Effects
ATO Production
Master Air Attack Plan
Completed 2b



Completed 3b

"Bring Your Courage"



Operational Assessment

Strategic Plans

Combat Operations

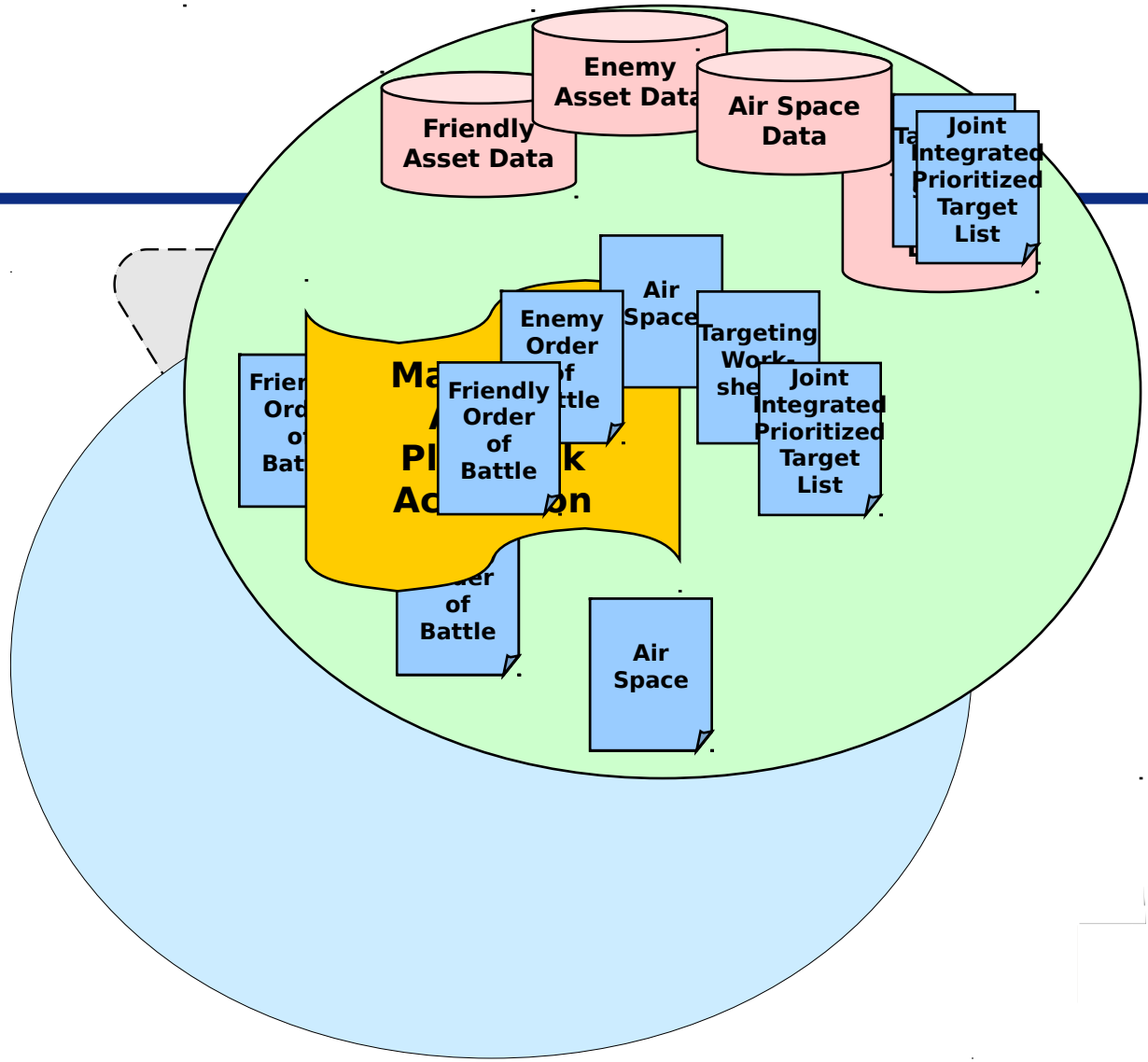
Joint Effects

ATO Production

Master Air Attack Plan

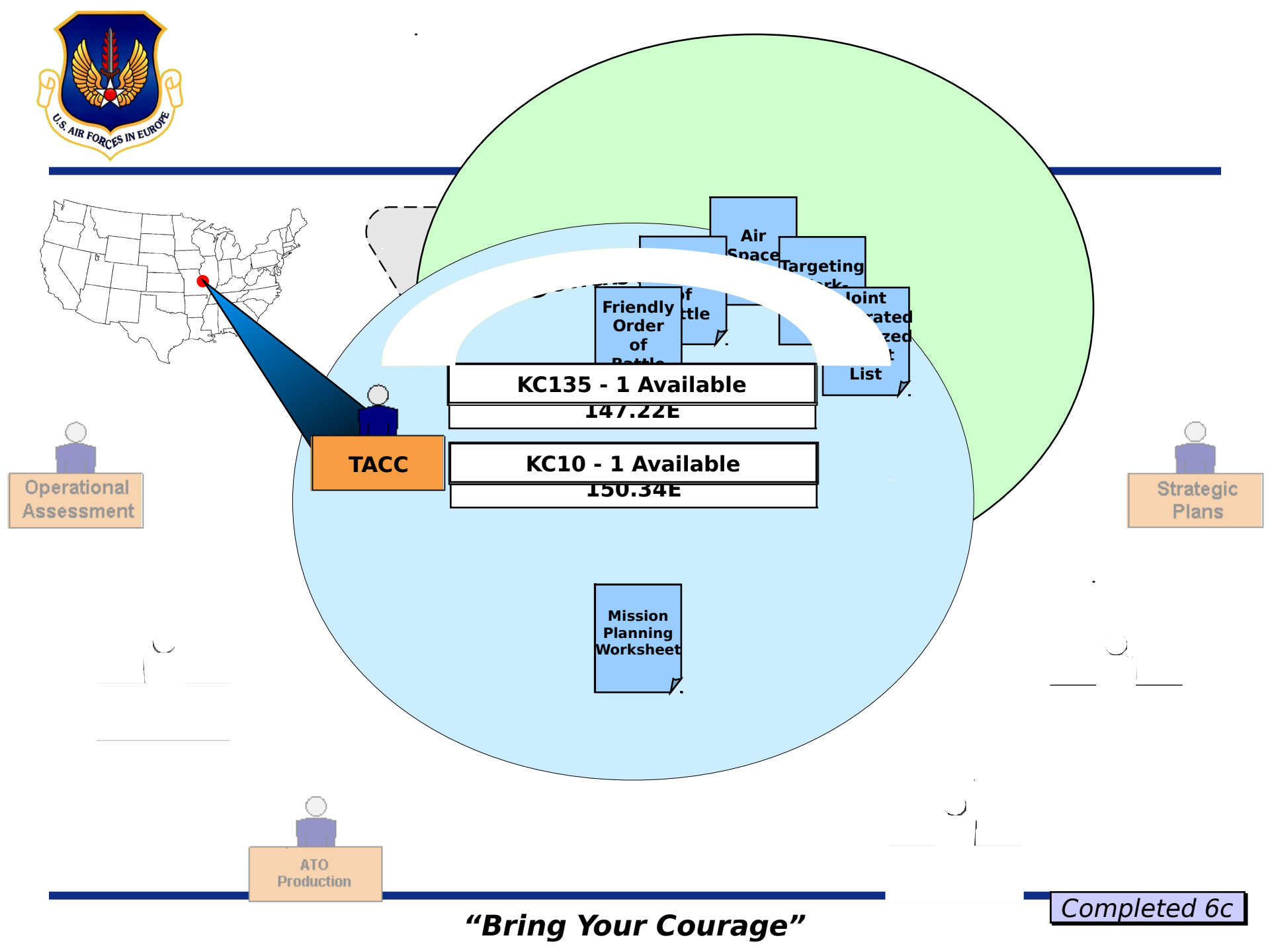
Completed 4a

"Bring Your Courage"



Completed 5b

"Bring Your Courage"



"Bring Your Courage"

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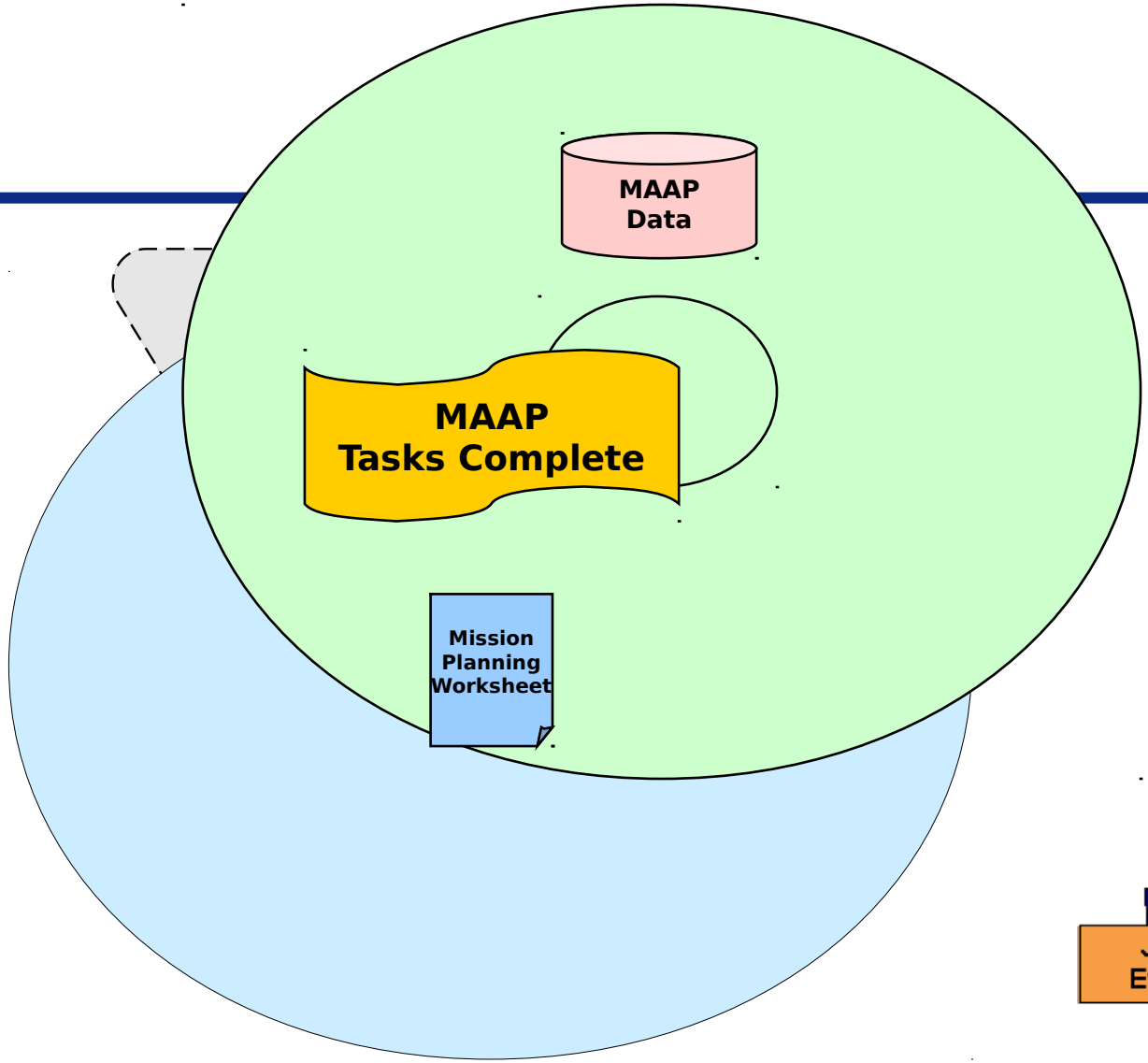


Operational Assessment

Strategic Plans

Combat Operations

Joint Effects

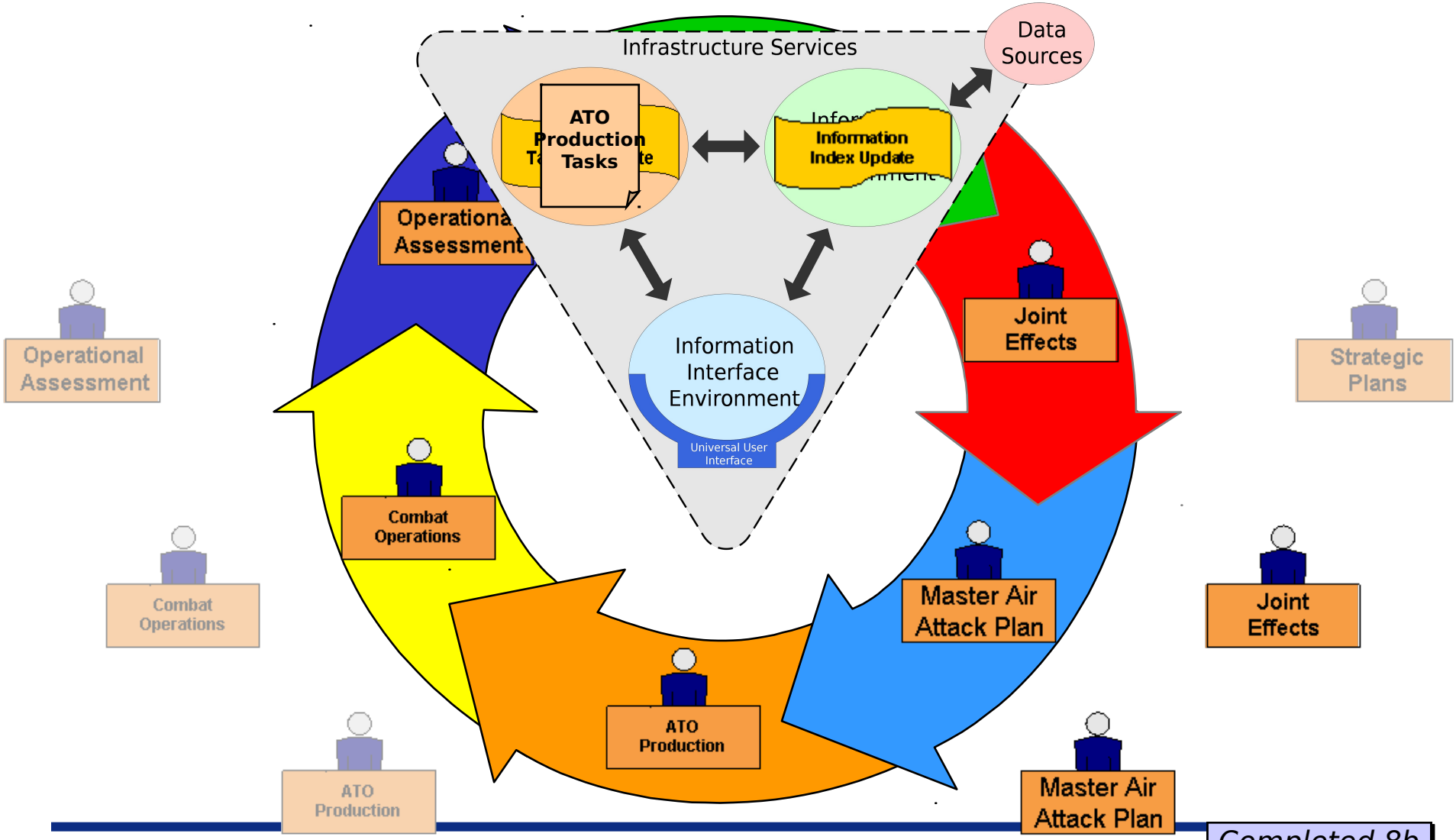
ATO Production

Master Air Attack Plan

Completed 7a

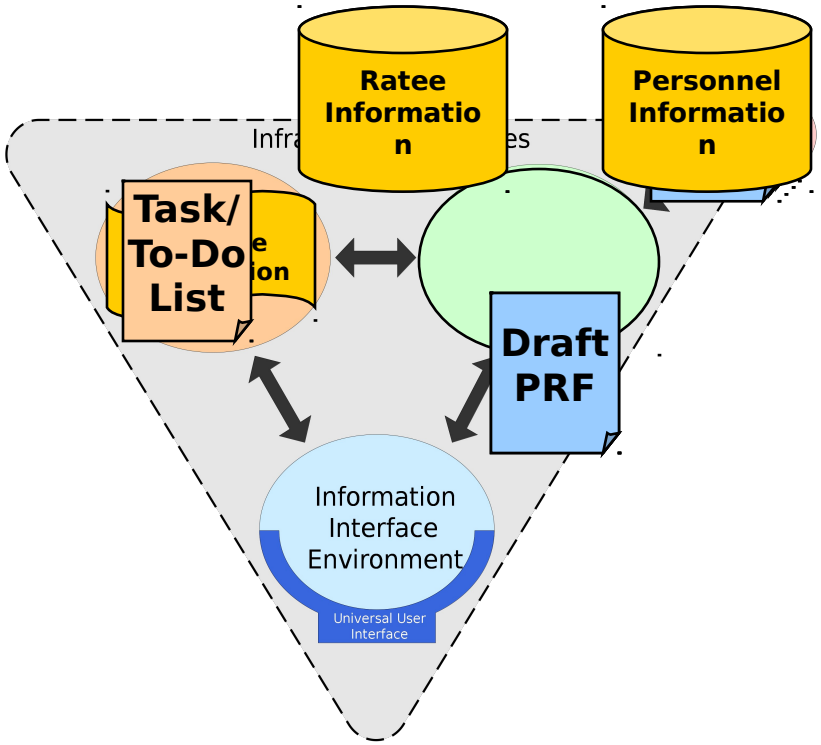
"Bring Your Courage"

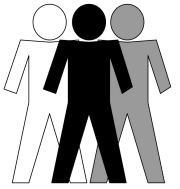
Portion of ATO Production EIM Vignette

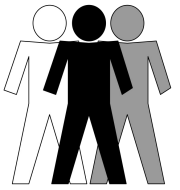


Completed 8b

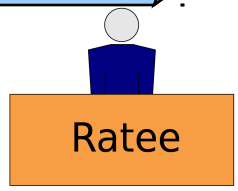
PRF Vignette
Initialization

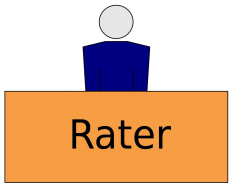



MLR


Reviewers

Additional Information


Ratee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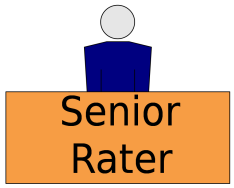
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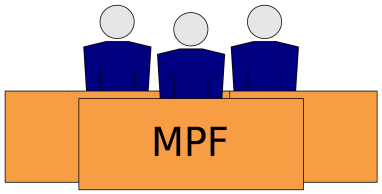
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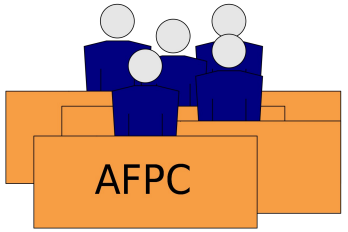
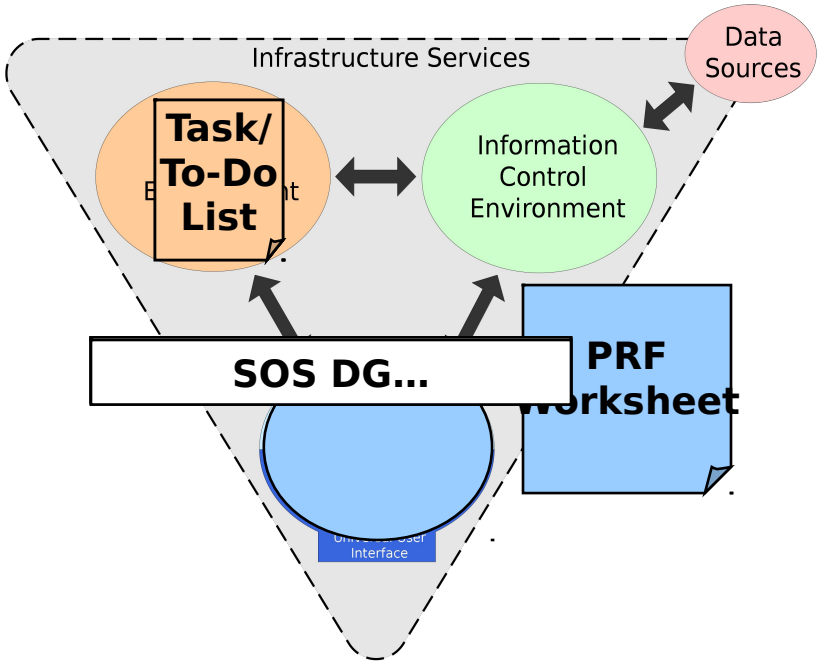
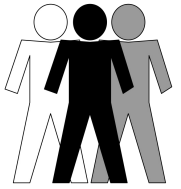

AFPC

"Bring Your Courage"

PRF Vignette
Composing the PRF

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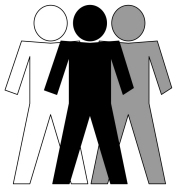
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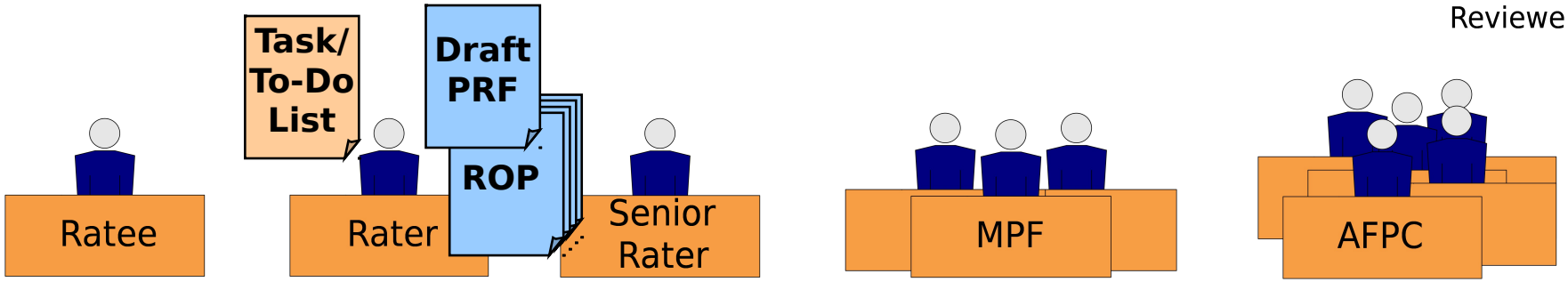
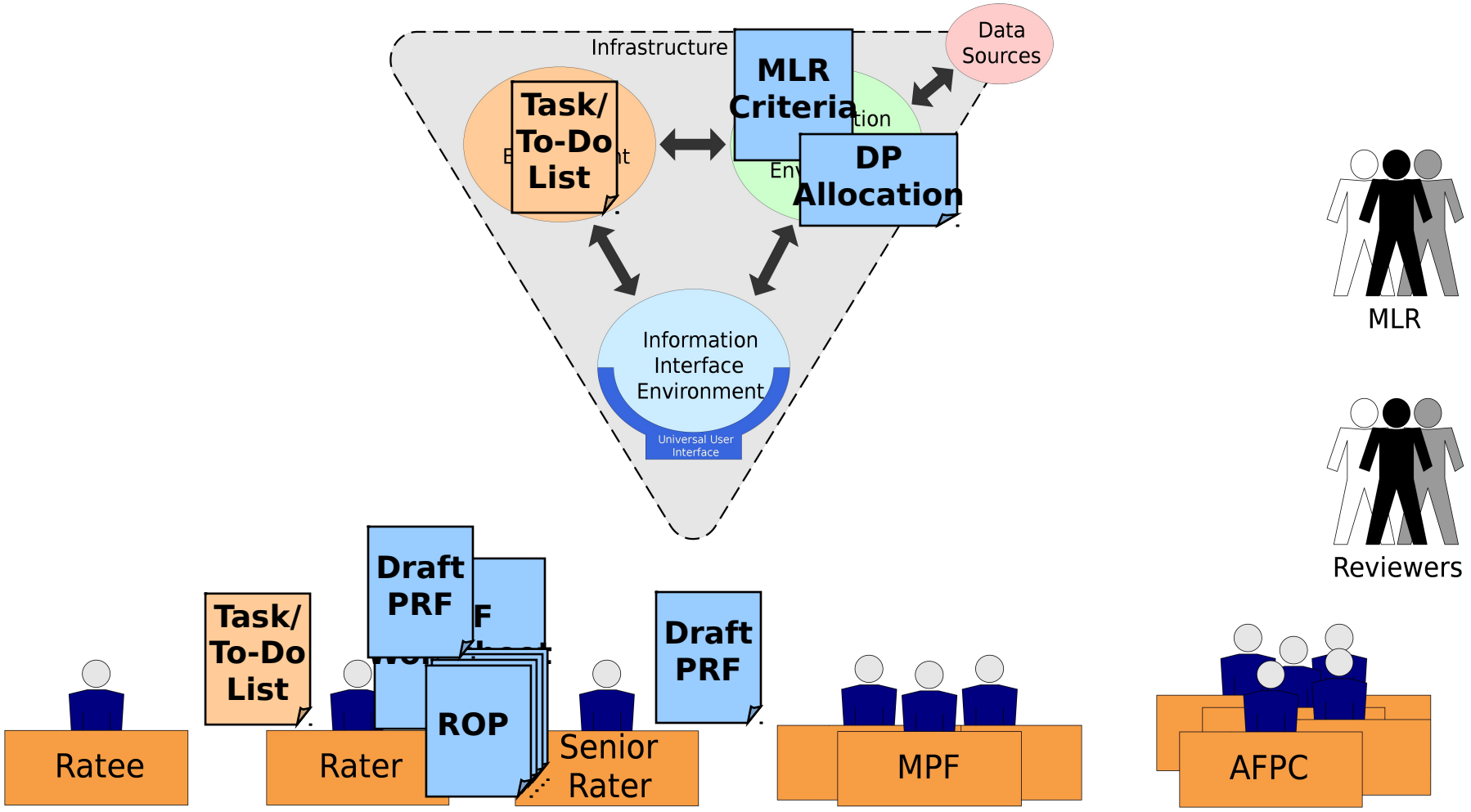


PRF Vignette
Reviewing the PRF



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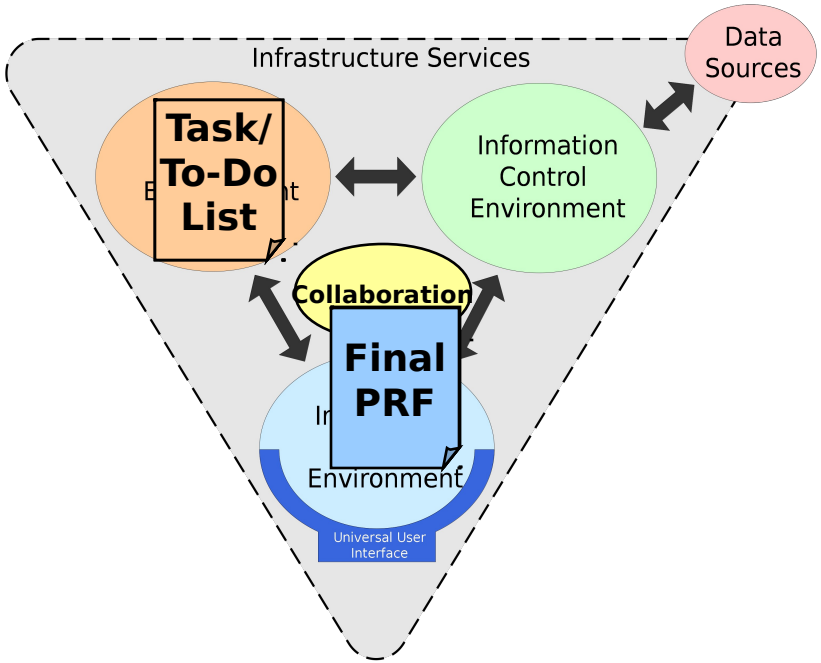
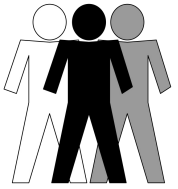
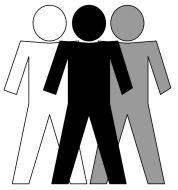
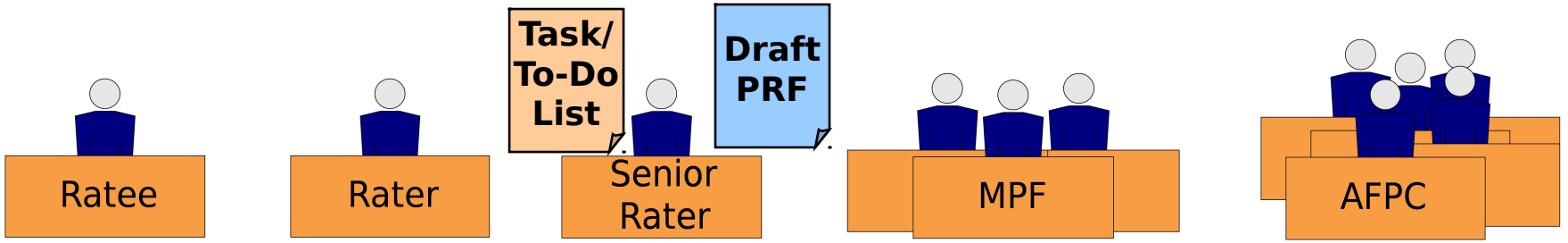


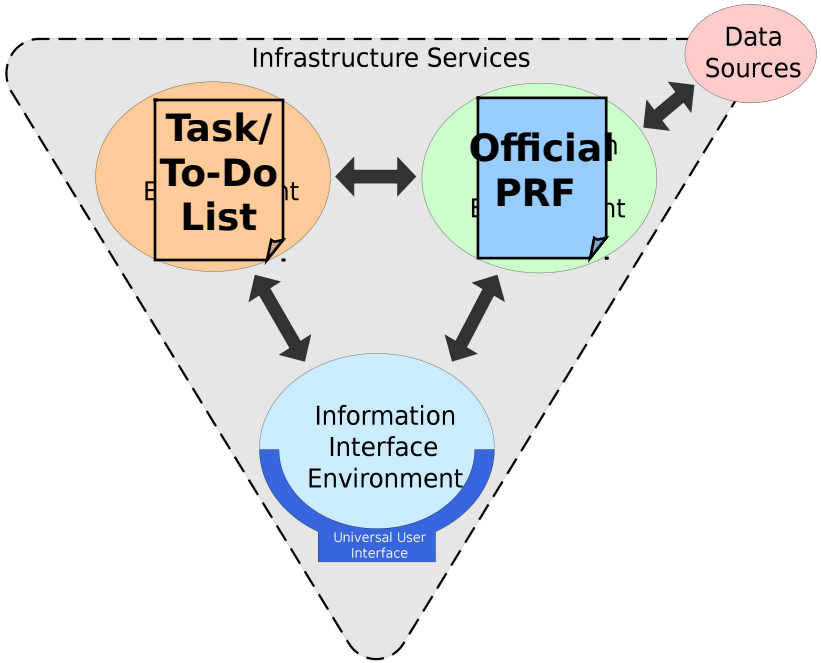


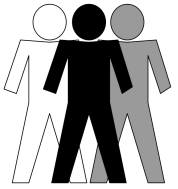




"Bring Your Courage"

PRF Vignette
Completing PRF

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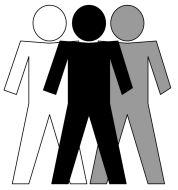
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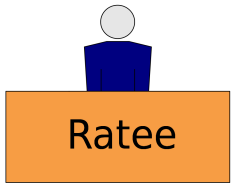
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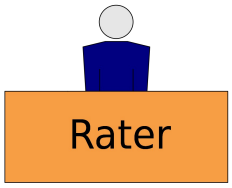
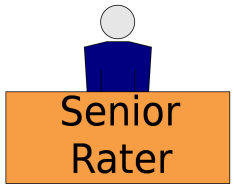
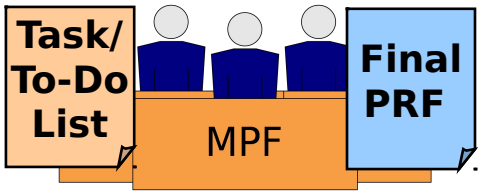
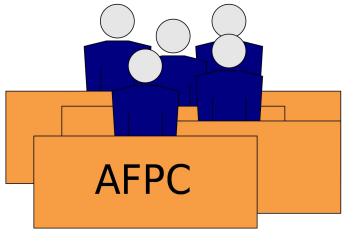

Rater


Senior Rater

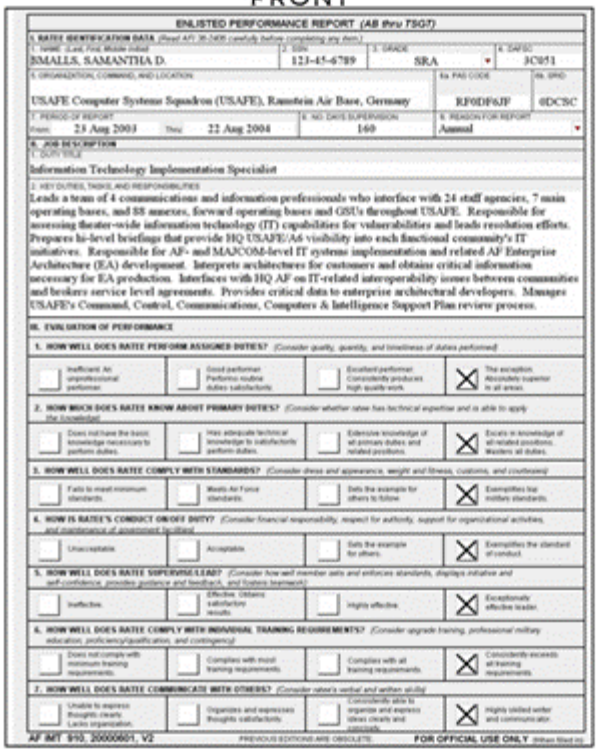



AFPC

Notional Collaborative Tools
EPR Coordination Example

Ratee: SrA Samantha Smalls

FRONT



ENLISTED PERFORMANCE REPORT (AB thru TSGT)

I. RATEE IDENTIFICATION DATA (Read AFI 36-2406 carefully before completing any item.)

1. NAME (Last, First, Middle Initial)	2. SSN	3. GRADE	4. DAFSC
SMALLS, SAMANTHA D.	123-45-6789	SRA	3C051

5. ORGANIZATION, COMMAND, AND LOCATION	5a. PAS CODE	5b. SPID
USAFE Computer Systems Squadron (USAFE), Ramstein Air Base, Germany	RF0DF6JP	0DCSC

7. PERIOD OF REPORT	8. NO. DAYS SUPERVISION	9. REASON FOR REPORT
From: 23 Aug 2003 Thru: 22 Aug 2004	160	Annual

II. JOB DESCRIPTION

1. DUTY TITLE

Information Technology Implementation Specialist

2. KEY DUTIES, TASKS, AND RESPONSIBILITIES

Leads a team of 4 communications and information professionals who interface with 24 staff agencies, 7 main operating bases, and 88 annexes, forward operating bases and GSUs throughout USAFE. Responsible for assessing theater-wide information technology (IT) capabilities for vulnerabilities and leads resolution efforts. Prepares hi-level briefings that provide HQ USAFE/A6 visibility into each functional community's IT initiatives. Responsible for AF- and MAJCOM-level IT systems implementation and related AF Enterprise Architecture (EA) development. Interprets architectures for customers and obtains critical information necessary for EA production. Interfaces with HQ AF on IT-related interoperability issues between communities and brokers service level agreements. Provides critical data to enterprise architectural developers. Manages USAFE's Command, Control, Communications, Computers & Intelligence Support Plan review process.

III. EVALUATION OF PERFORMANCE

1. HOW WELL DOES RATEE PERFORM ASSIGNED DUTIES? (Consider quality, quantity, and timeliness of duties performed)

Inefficient. An unprofessional performer.	Good performer. Performs routine duties satisfactorily.	Excellent performer. Consistently produces high quality work.	X The exception. Abundantly superior in all areas.

2. HOW MUCH DOES RATEE KNOW ABOUT PRIMARY DUTIES? (Consider whether ratee has technical expertise and is able to apply the knowledge)

Does not have the basic knowledge necessary to perform duties.	Has adequate technical knowledge to satisfactorily perform duties.	Extensive knowledge of all primary duties and related positions.	X Excels in knowledge of all related positions. Masters all duties.

3. HOW WELL DOES RATEE COMPLY WITH STANDARDS? (Consider dress and appearance, weight and fitness, customs, and courtesies)

Fails to meet minimum standards.	Meets Air Force standards.	Sets the example for others to follow.	X Exemplifies top military standards.

4. HOW IS RATEE'S CONDUCT ON/OFF DUTY? (Consider financial responsibility, respect for authority, support for organizational activities, and maintenance of government facilities)

Unacceptable	Acceptable	Sets the example for others.	X Exemplifies the standard of conduct.

5. HOW WELL DOES RATEE SUPERVISE/LEAD? (Consider how well member sets and enforces standards, displays initiative and self-confidence, provides guidance and feedback, and fosters teamwork)

Ineffective.	Effective. Obtains satisfactory results.	Highly effective.	X Exceptionally effective leader.

6. HOW WELL DOES RATEE COMPLY WITH INDIVIDUAL TRAINING REQUIREMENTS? (Consider upgrade training, professional military education, proficiency/qualification, and contingency)

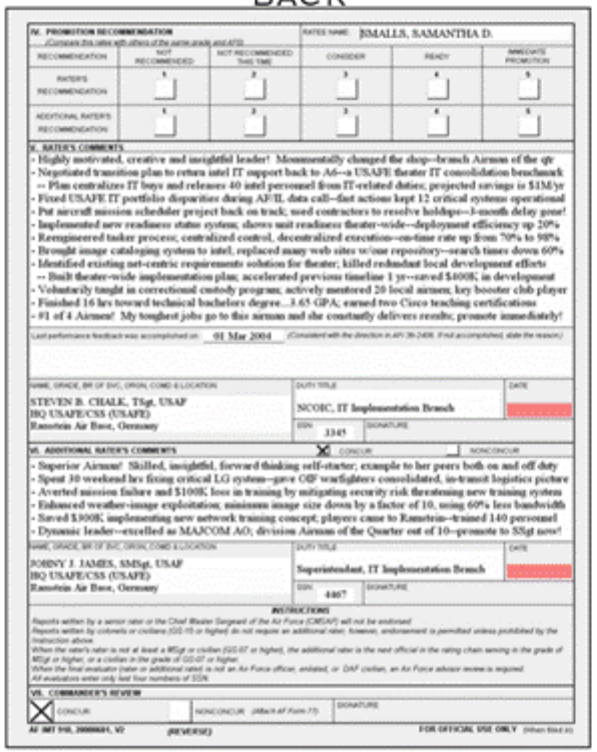
Does not comply with minimum training requirements.	Complies with most training requirements.	Complies with all training requirements.	X Consistently exceeds all training requirements.

7. HOW WELL DOES RATEE COMMUNICATE WITH OTHERS? (Consider ratee's verbal and written skills)

Unable to express thoughts clearly. Lacks organization.	Organizes and expresses thoughts satisfactorily.	Considerably able to organize and express ideas clearly and concisely.	X Highly skilled writer and communicator.

AF IMT 910, 20000601, V2 PREVIOUS EDITIONS ARE OBSOLETE. FOR OFFICIAL USE ONLY (When filled in)

BACK



IV. PROMOTION RECOMMENDATION (Compare this ratee with others of the same grade and AFSC)

RATEE NAME: JSMALLS, SAMANTHA D.

RECOMMENDATION	NOT RECOMMENDED	NOT RECOMMENDED THIS TIME	CONSIDER	READY	IMMEDIATE PROMOTION
RATER'S RECOMMENDATION	1	2	3	4	5
ADDITIONAL RATER'S RECOMMENDATION	1	2	3	4	5

V. RATER'S COMMENTS

- Highly motivated, creative and insightful leader! Monumentally changed the shop--branch Airman of the qtr
- Negotiated transition plan to return intel IT support back to A6--a USAFE theater IT consolidation benchmark
- -- Plan centralizes IT buys and releases 40 intel personnel from IT-related duties; projected savings is $1M/yr
- Fixed USAFE IT portfolio disparities during AF/IL data call--fast actions kept 12 critical systems operational
- Put aircraft mission scheduler project back on track; used contractors to resolve holdups--3-month delay gone!
- Implemented new readiness status system; shows unit readiness theater-wide--deployment efficiency up 20%
- Reengineered tanker process; centralized control, decentralized execution--on-time rate up from 70% to 98%
- Brought image cataloging system to intel; replaced many web sites w/one repository--search times down 60%
- Identified existing net-centric requirements solution for theater; killed redundant local development efforts
- -- Built theater-wide implementation plan; accelerated previous timeline 1 yr--saved $400K in development
- Voluntarily taught in correctional custody program; actively mentored 20 local airmen; key booster club player
- Finished 16 hrs toward technical bachelors degree...3.65 GPA; earned two Cisco teaching certifications
- #1 of 4 Airmen! My toughest jobs go to this airman and she constantly delivers results; promote immediately!

Last performance feedback was accomplished on: 01 Mar 2004 (Consistent with the direction in AFI 36-2406. If not accomplished, state the reason.)

NAME, GRADE, BR OF SVC, ORGN, COMD & LOCATION	DUTY TITLE	DATE
STEVEN B. CHALK, TSgt, USAF HQ USAFE/CSS (USAFE) Ramstein Air Base, Germany	NCOIC, IT Implementation Branch	

SSN	SIGNATURE
3345	

VI. ADDITIONAL RATER'S COMMENTS

X CONCUR NONCONCUR

- Superior Airman! Skilled, insightful, forward thinking self-starter; example to her peers both on and off duty
- Spent 30 weekend hrs fixing critical LG system--gave OIF warfighters consolidated, in-transit logistics picture
- Averted mission failure and $100K loss in training by mitigating security risk threatening new training system
- Enhanced weather-image exploitation; minimum image size down by a factor of 10, using 60% less bandwidth
- Saved $300K implementing new network training concept; players came to Ramstein--trained 140 personnel
- Dynamic leader--excelled as MAJCOM AO; division Airman of the Quarter out of 10--promote to SSgt now!

NAME, GRADE, BR OF SVC, ORGN, COMD & LOCATION	DUTY TITLE	DATE
JOHNNY J. JAMES, SMSgt, USAF HQ USAFE/CSS (USAFE) Ramstein Air Base, Germany	Superintendant, IT Implementation Branch	

SSN	SIGNATURE
4467	

INSTRUCTIONS

Reports written by a senior rater or the Chief Master Sergeant of the Air Force (CMSAF) will not be endorsed.
Reports written by colonels or civilians (GS-15 or higher) do not require an additional rater; however, endorsement is permitted unless prohibited by the instruction above.
When the rater's rater is not at least a WG/gt or civilian (GS-07 or higher), the additional rater is the next official in the rating chain serving in the grade of WG/gt or higher, or a civilian in the grade of GS-07 or higher.
When the final evaluator (rater or additional rater) is not an Air Force officer, enlisted, or DAF civilian, an Air Force advisor review is required.
All evaluators enter only last four numbers of SSN.

VII. COMMANDER'S REVIEW

X CONCUR NONCONCUR (Attach AF Form 77) SIGNATURE

AF IMT 910, 20000601, V2 (REVERSE) FOR OFFICIAL USE ONLY (When filled in)

COLLABORATION

TSgt Chalk
Supervisor

SMSgt James
Superintendant

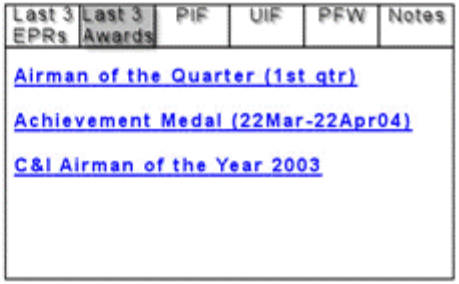
Capt Broem
Flight CC

CMSgt Taylor
First Sgt

Lt Col Hope
Squadron CC

MULTIMEDIA CENTER

REFERENCE DOCUMENTS



Last 3 EPRs	Last 3 Awards	PIF	UIF	PFW	Notes

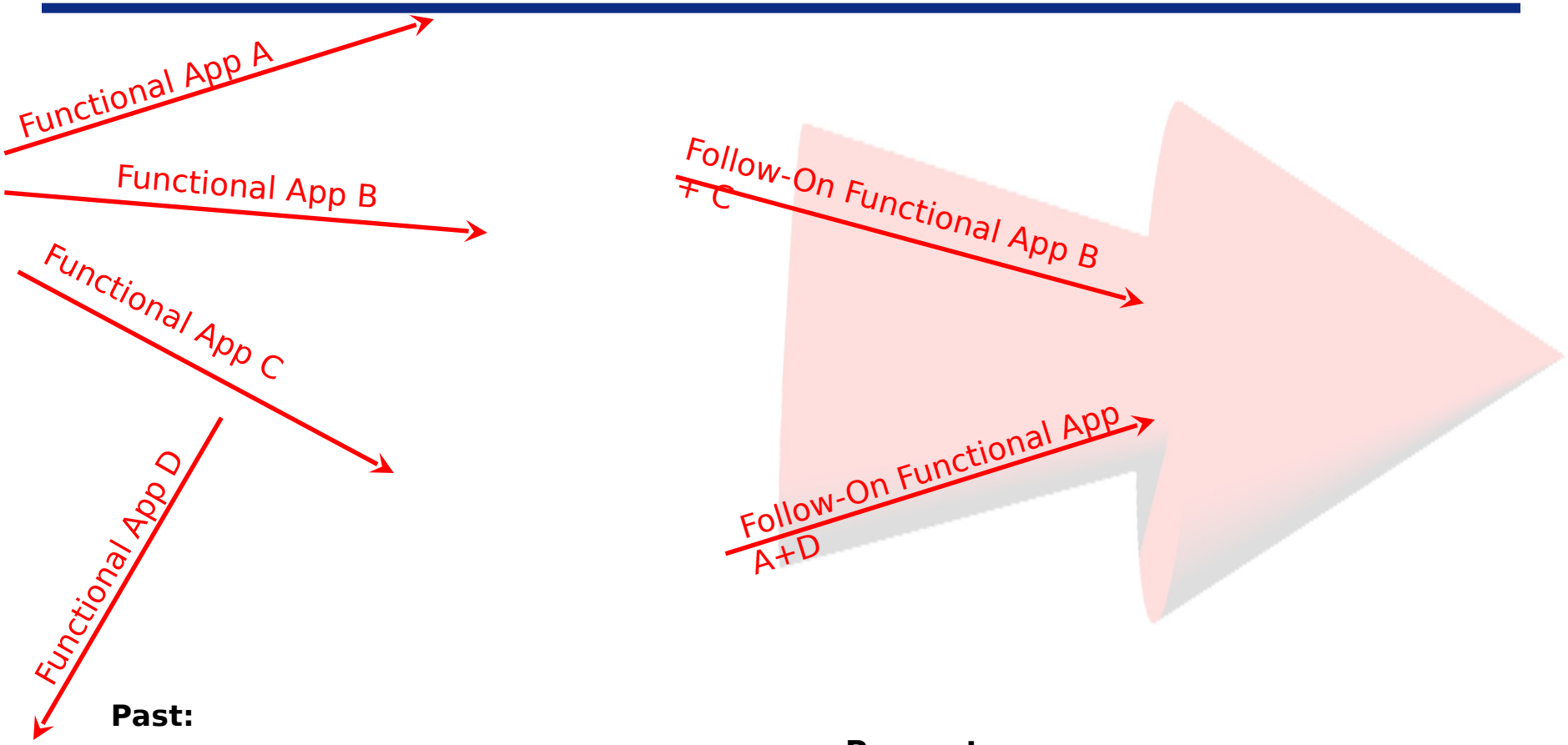
Airman of the Quarter (1st qtr)

Achievement Medal (22Mar-22Apr04)

C&I Airman of the Year 2003

"Bring Your Courage"

Direction of Functional Applications



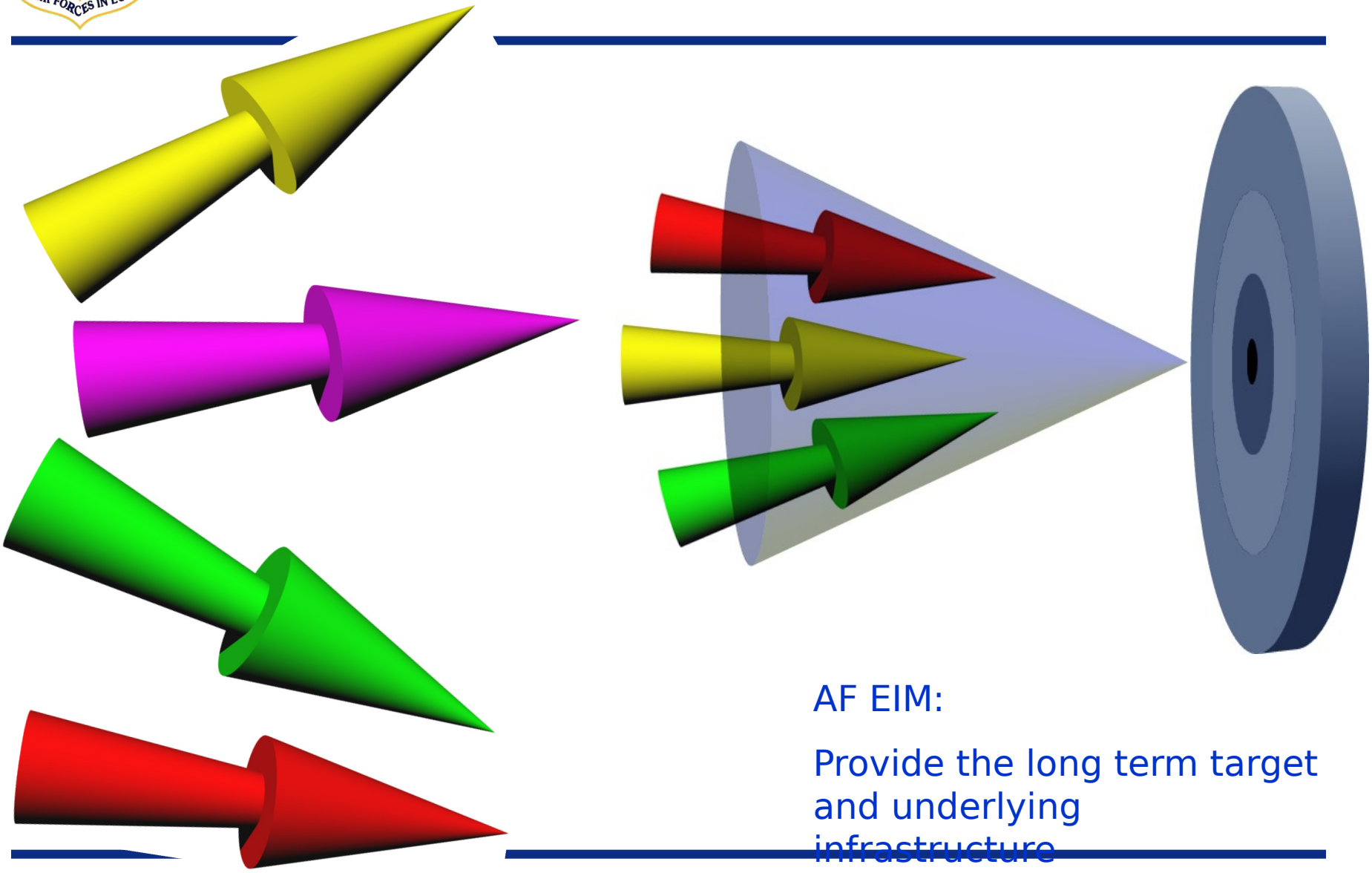
Past:

- **Little integration**
- **Separate user interfaces**
- **Separate underlying data structure**

Present:

- **Few applications**
- **Better integration**

Cross Functional Direction



AF EIM:

Provide the long term target and underlying infrastructure

Overarching Roadmap Ideas

- There are key decisions to be made
  - Far-reaching personnel and training issues
- Incremental fielding approach
  - Make good use of related efforts – planned and under way
  - Allow time for critical technology to mature
- Direct programs toward long range enterprise-wide goals
  - Provide course correction to legacy and ongoing programs
  - More stringent requirements on future systems
- Stick to high level roadmap – details TBD

Draft EIM Roadmap

- Key Questions
  - Overall approach
    - Framework modifications?
    - Vendor flexibility
  - Apportion EIM duties?
    - Who are “IMOs”?
  - Workforce adjustments?
  - How to cross functional boundaries?

- Near Term Goals – 1-2 years
  - Complete EIM pilot projects
  - Program for follow-on projects
  - Redirect “architecture” efforts
    - Determine data architecture
    - Process engineering focus
  - Modernize IM approach
  - Determine long term roles & responsibilities
  - Revise training planning
  - Examine C&I workforce structure
  - Continued functional integration

- Mid Term Goals – 5 years
  - 2nd generation EIM pilot projects
  - Begin fielding incremental capabilities
    - E.g. infrastructure services
  - Work IA/network security issues
  - Increase cross functional integration
  - Begin building process & task libraries
  - Determine workforce impacts of increase virtual support
  - Begin implementing workforce modifications
  - Select EIM toolset components

- Long Term Goals
  - Course correction of toolset for technology insertion
  - Certify handling of security and sensitive data
  - Complete integration across functional areas
  - Adjust workforce for virtual support and process improvement
  - Complete implementing workforce modifications

Enterprise Information Management Vision

- **EIM: Management of information across the Air Force enterprise.**
- **A change in *HOW we operate***
- **Transforming use and management of information into warfighting enablers across the continuum of AF missions**
- **Process engineering, control and management disciplines, vs. systems and applications**
- **Deliver essential capabilities to our Airmen**

Questions?

"The Air Force Information Vision: Enabled mission capabilities through seamlessly integrated access to the right information anytime, anywhere"

– AF Info Strategy, Aug 02

EIM CONOPS POCs

AF/ILCSE, Enterprise Information Mgt Branch

- **Lt Col Theresa Giorlando, DSN: 425-1526, Theresa.Giorlando@pentagon.af.mil**

USAFE/A6TS, Enterprise Services Branch

- **Lt Col John Keffer, DSN 480-3169, john.keffer@ramstein.af.mil**

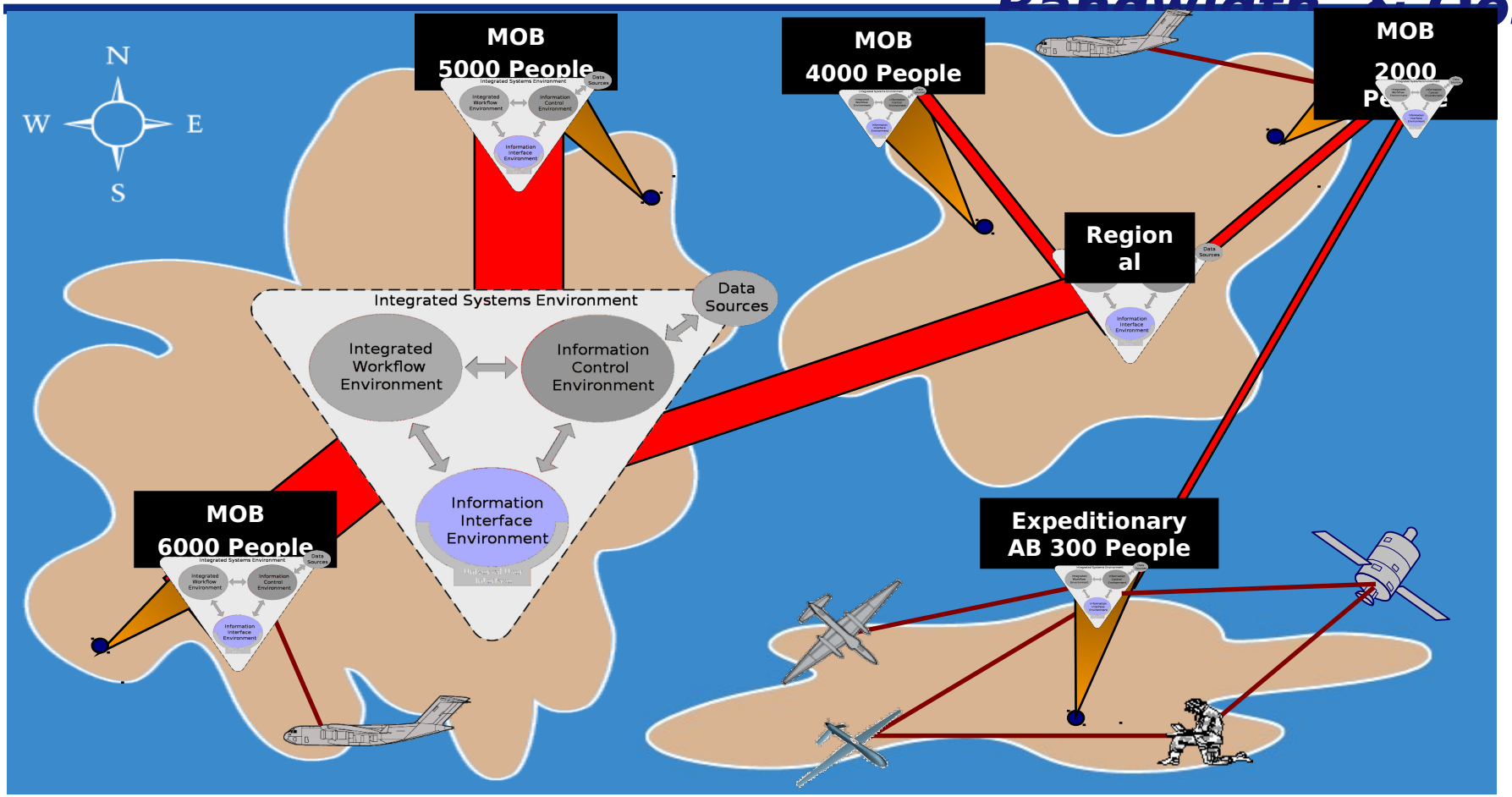
Back-Up Charts

In-Garrison vs Deployed

- Expeditionary Environment reach-back to Infrastructure System
  - Virtual support further reduces expeditionary footprint
- Quality of Service (QoS) tightly governed by CC's priorities
- Rapid mission customization
  - Generic MPL and MTL (90% solution)
  - Tailored to specific mission
- Information Control
  - Real time decisions on content staging
  - Lifecycle mgt
- Common, location independent capabiliti
  - Largely standardized for quicker traini
  - Adaptable & flexible display of data

In-Garrison vs Deployed

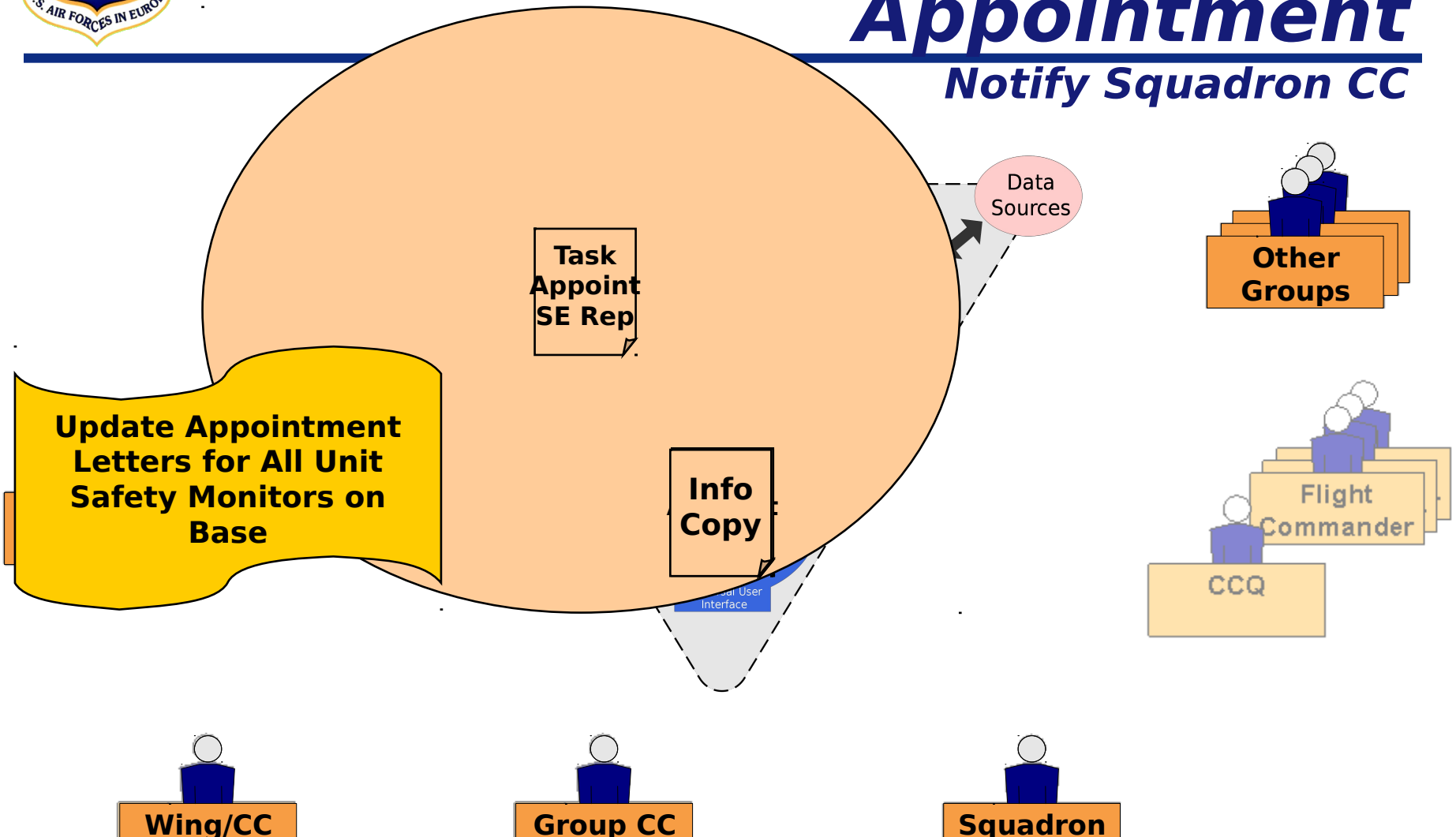
Content Staging, Services Staging, Bandwidth & QoS



"OSD's future vision for transformed joint forces in the following "key joint force attributes": fully integrated, expeditionary, networked, ***decentralized,*** adaptable, decision superiority, and lethality." – AF Transformation Flight Plan

Safety Monitor Appointment

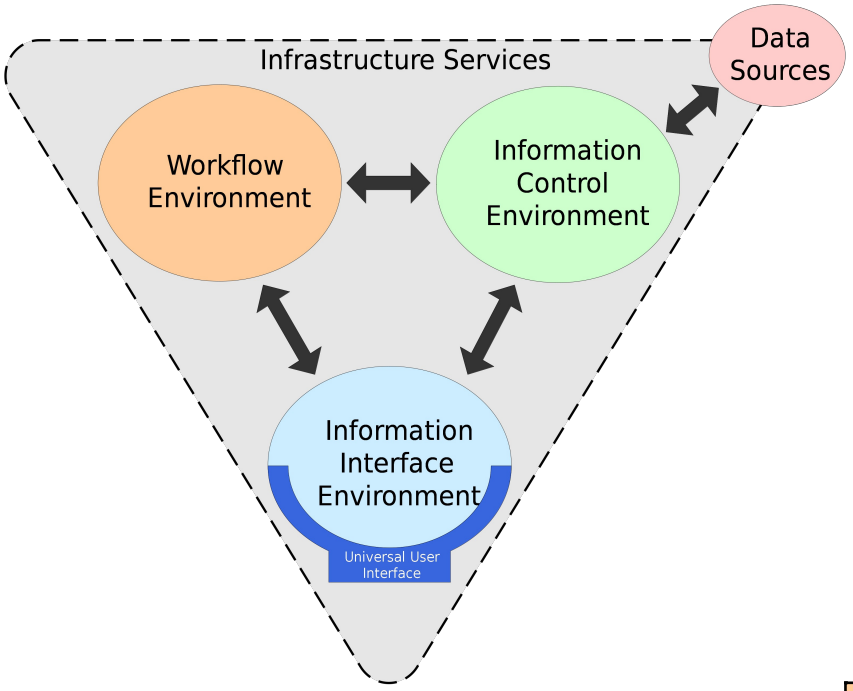
Notify Squadron CC



Completed 1a

Safety Monitor Appointment

Delegation



Wing Safety

Flight Commander

CCQ

Wing/CC Exec

Group CC

Task Appoint SE Rep

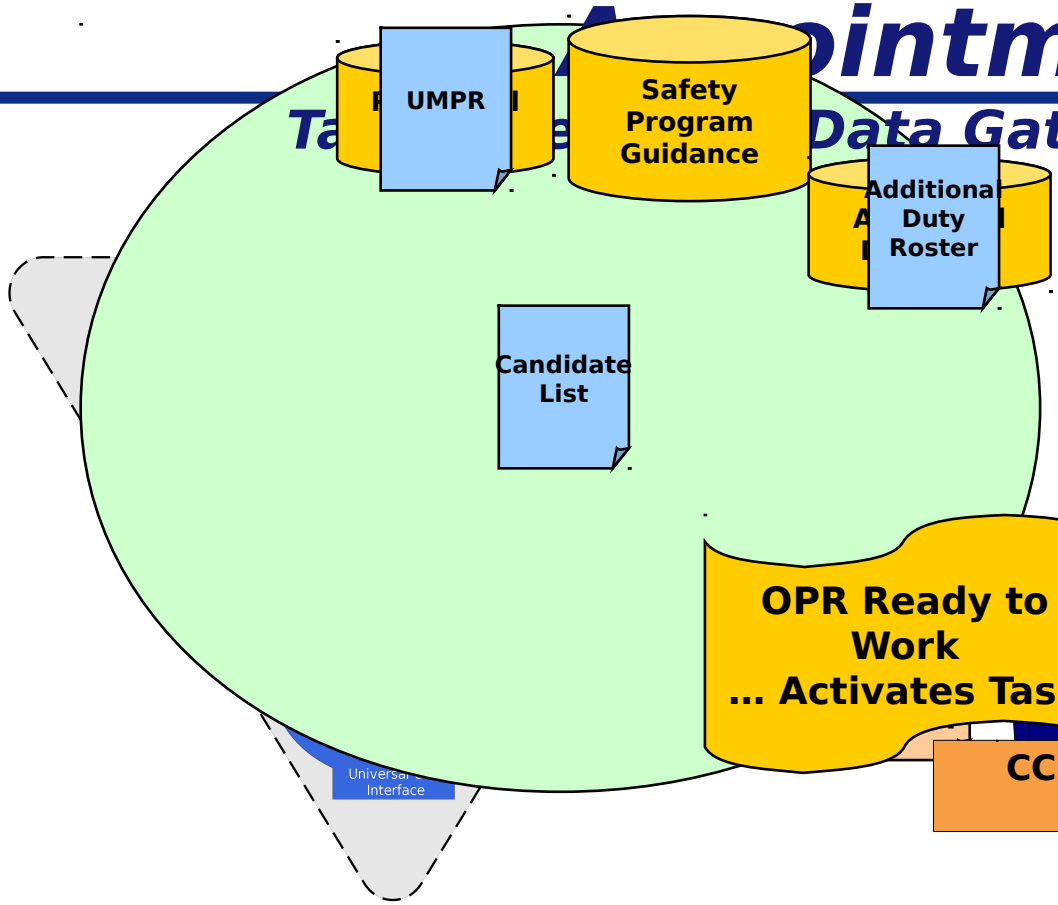
Squadron Commander

Delegate to CCQ; Flt CCs coord

Completed 2a

Safety Monitor Appointment

Ta… Data Gathering



Wing Safety

Wing/CC Exec

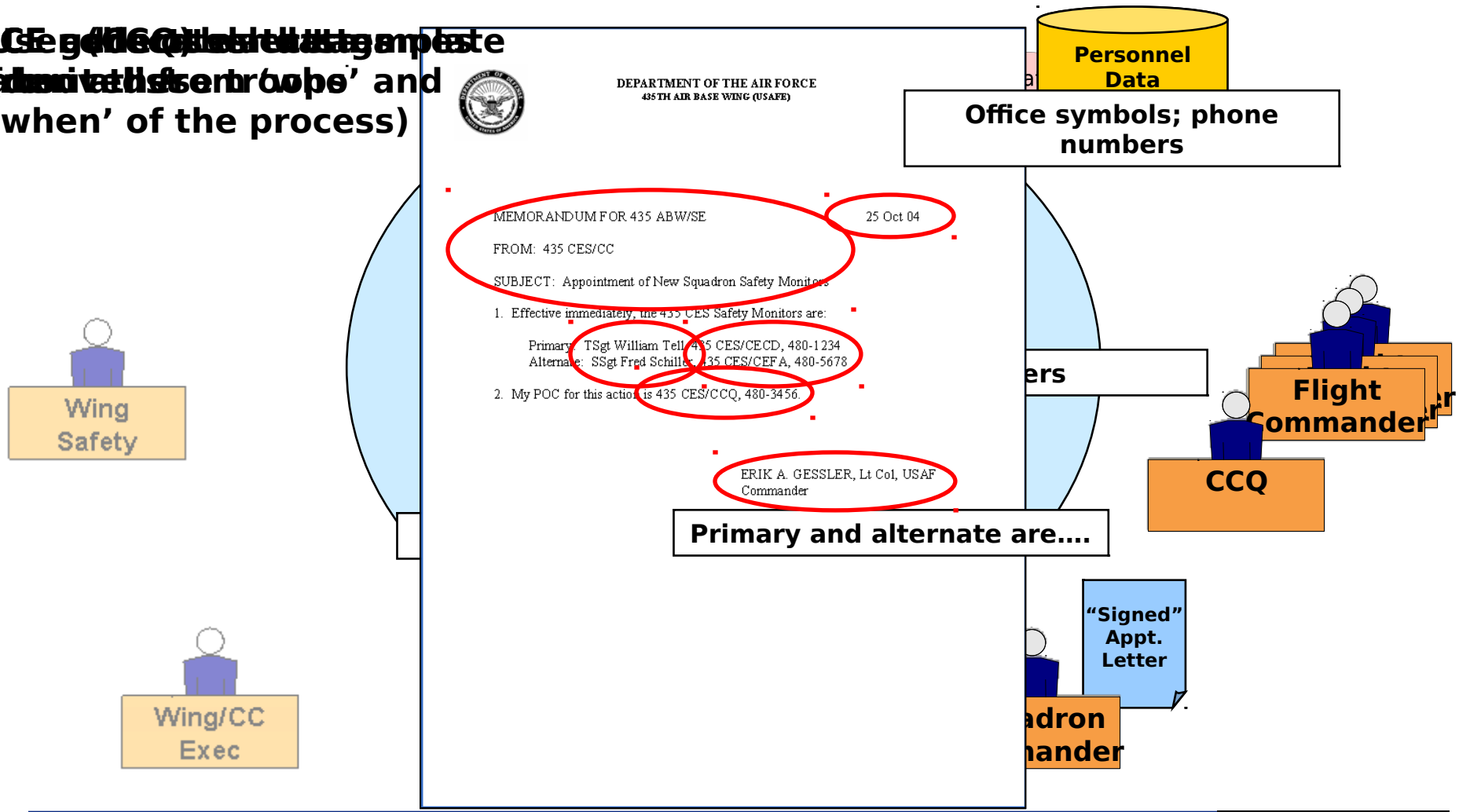
Group CC

Squadron Commander

Safety Monitor Appointment

Collaboration

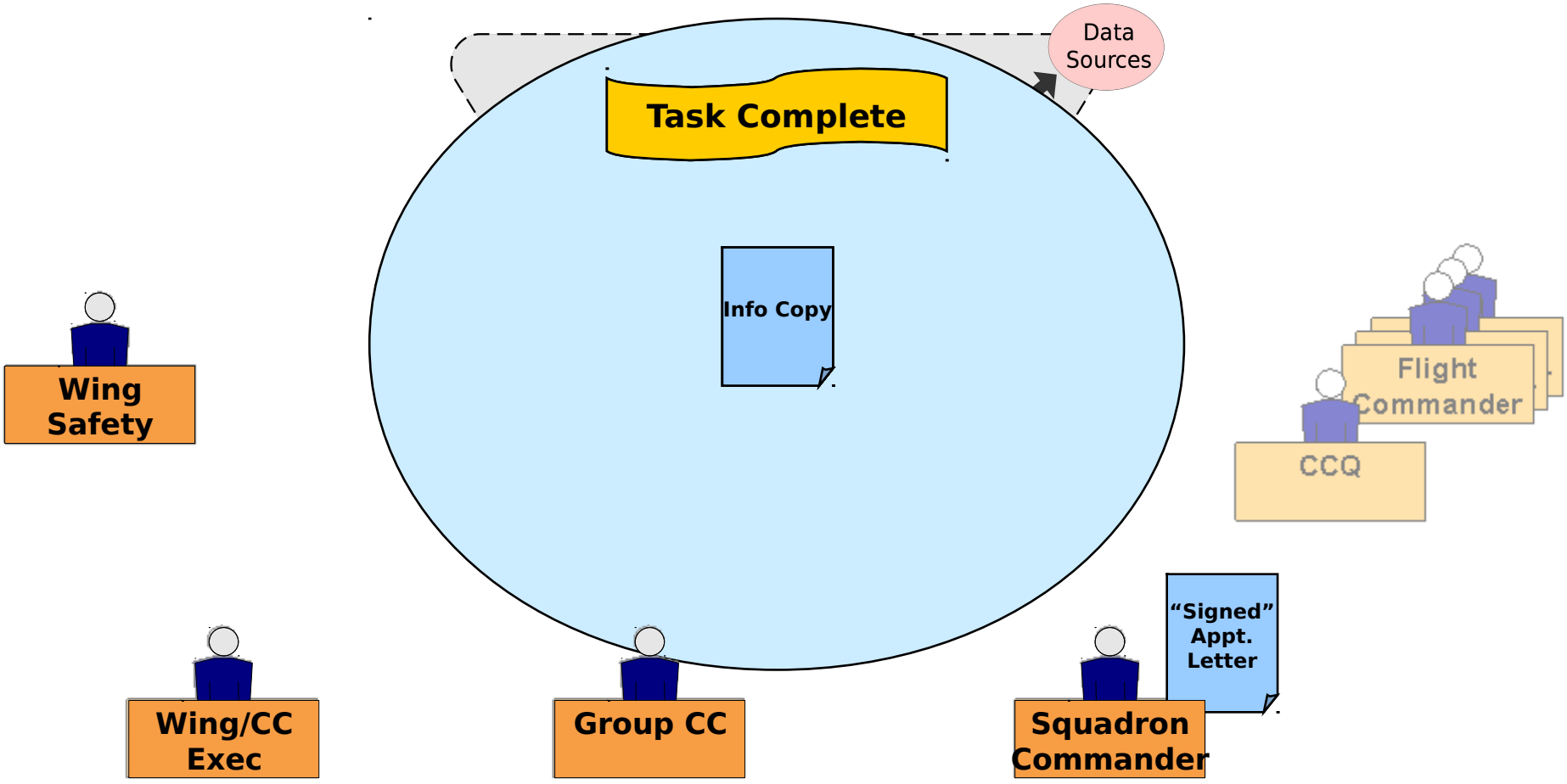
Use [illegible] template
[illegible] 'who' and
'when' of the process)



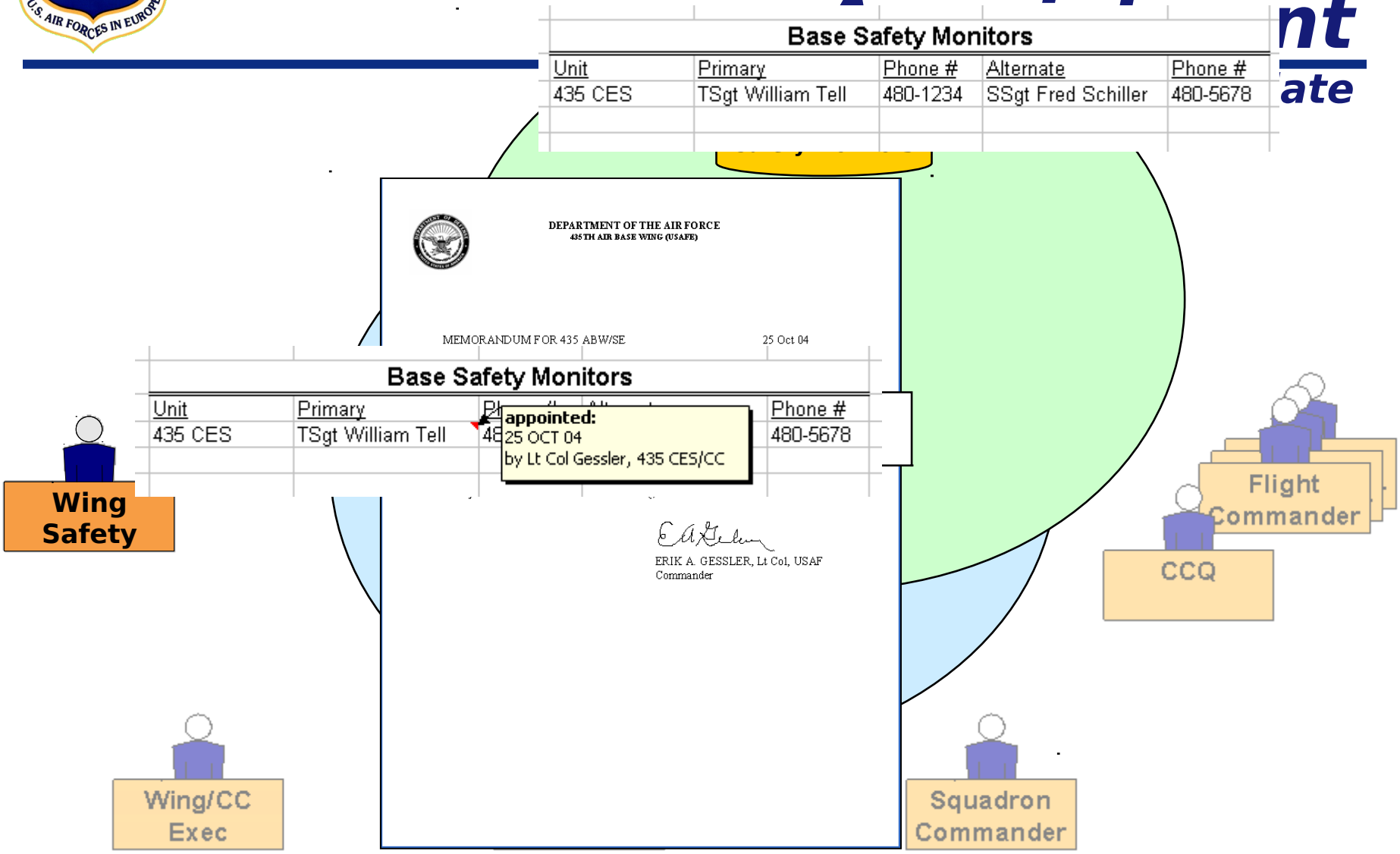
Completed 4f

Safety Monitor Appointment

Task Complete



Safety Monitor



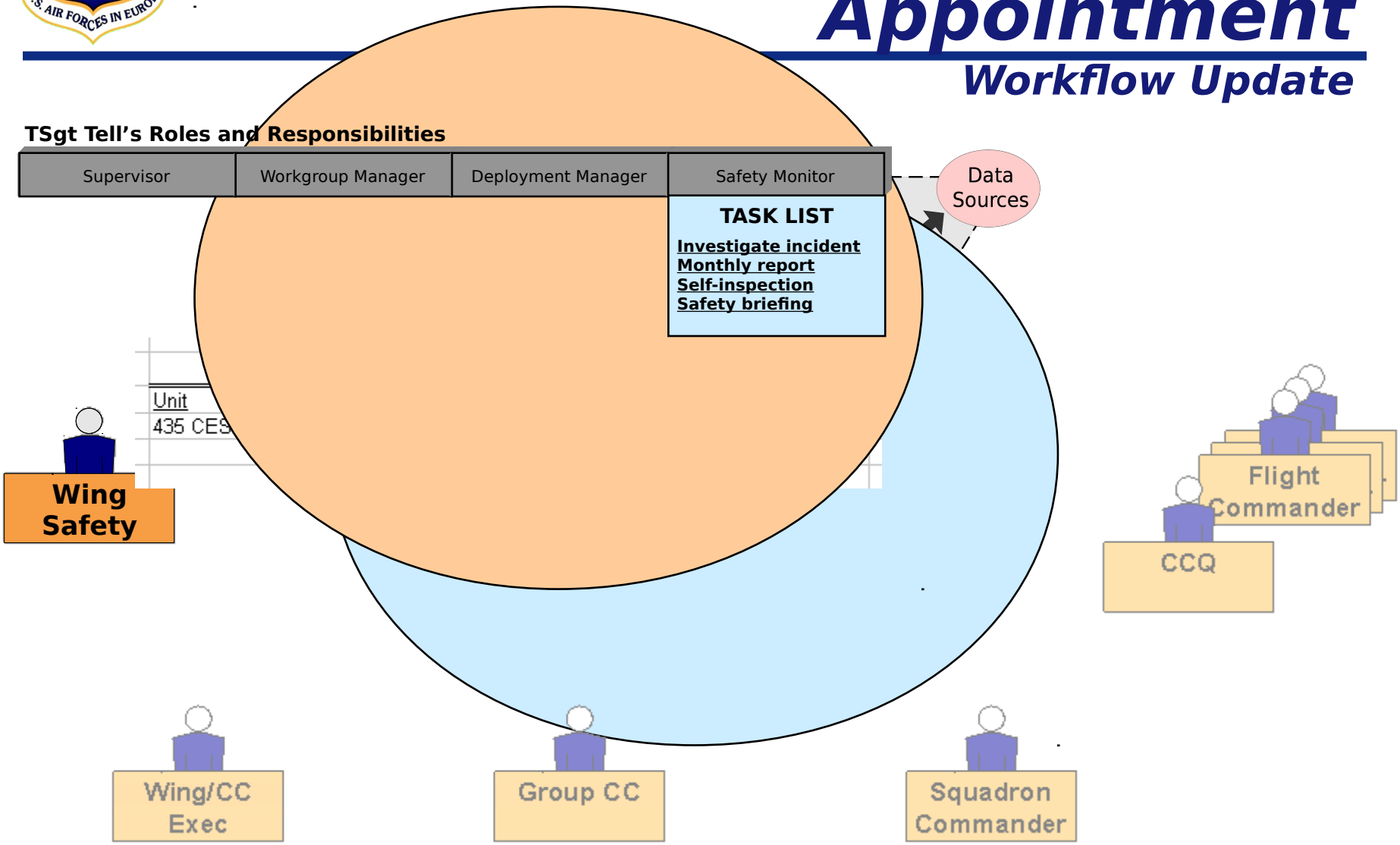
"Bring Your Courage"

Completed 6a

Safety Monitor Appointment

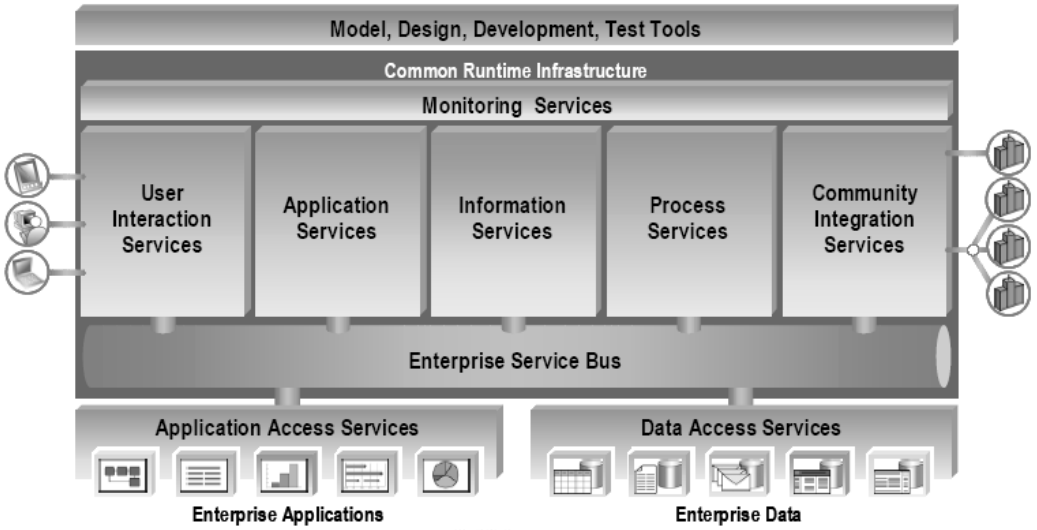
Workflow Update

TSgt Tell's Roles and Responsibilities

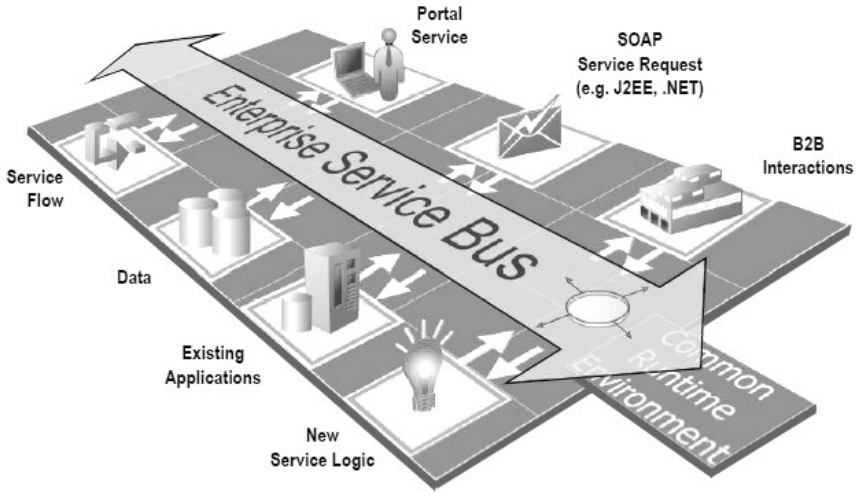


Completed 7a

Commonality of Core Enterprise Software Suites ?



ce: IBM 2004



Source: IBM 2004

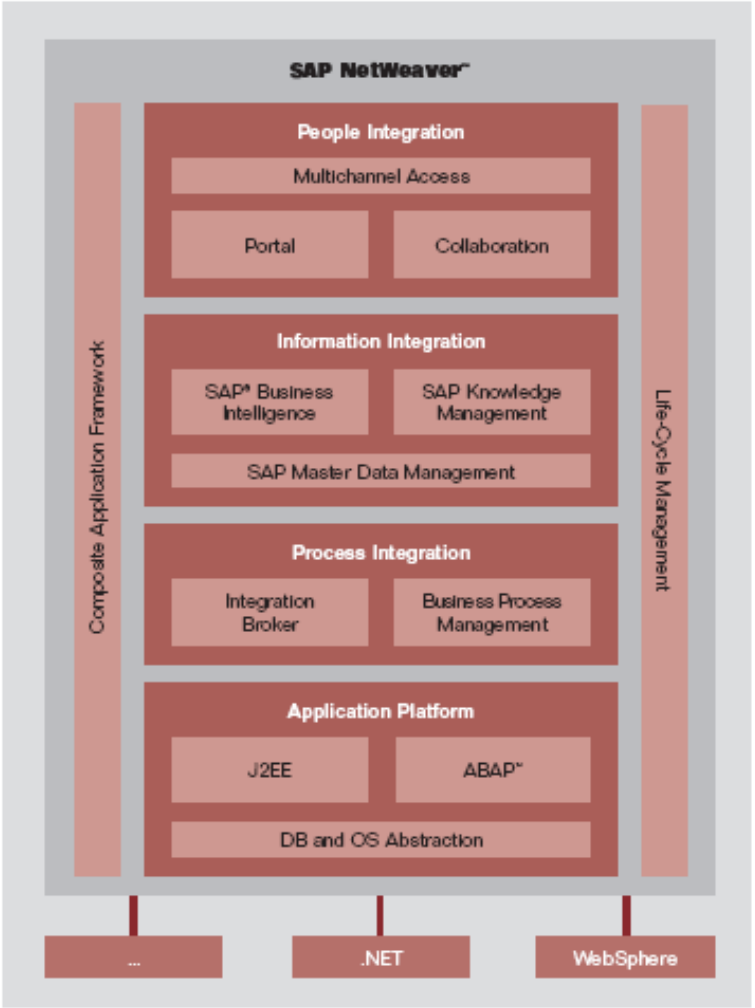


Figure 1: SAP BI and SAP NetWeaver

Examples of Interoperability of Core Enterprise Software Suites

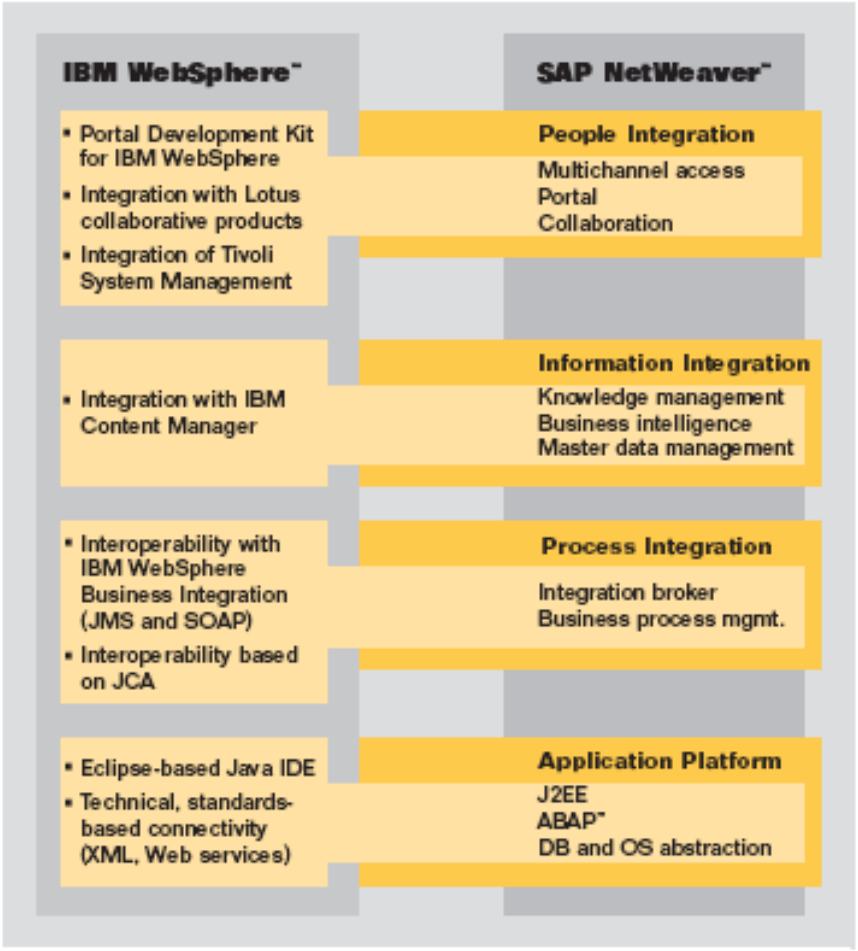


Figure 4: Overview – IBM WebSphere

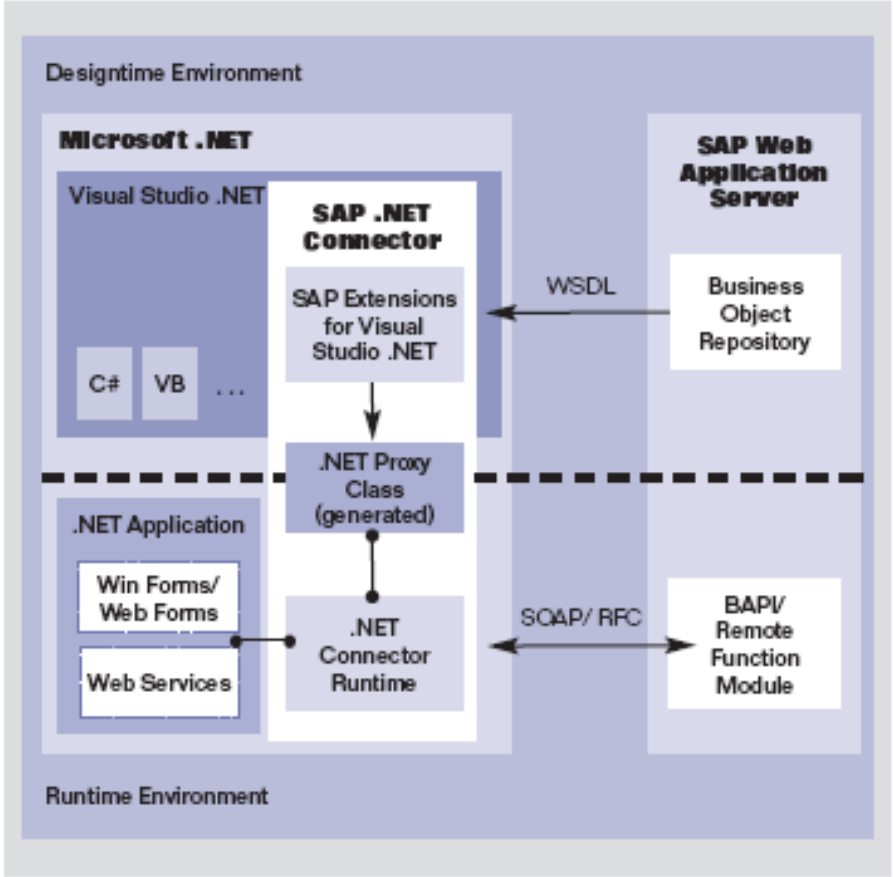


Figure 1: SAP .NET Connector Architecture